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MANUFACTURING GROWTH IN THE TENNESSEE VALLEY: TRENDS AND PROSPECTS[1]

Allan G. Pulsipher, Robert W. Gilmer,
*and Hubert Hinote**

Manufacturing employment in the Tennessee Valley[2] grew at rates far faster than in other parts of the U.S. from the 1950s to the early 1970s. By the late 1960s, the 170-county area for which the Tennessee Valley Authority (TVA) generates electricity was relatively specialized in manufacturing, with about 30.0 percent of its workers in manufacturing in contrast to 23.0 percent in the U.S. as a whole. In recent years, the growth of the Valley's manufacturing sector has slowed down. The region's manufacturers were hit very hard by the 1980-1982 recession, as high interest rates crippled markets in construction, autos, and durable goods.[3] But the slowdown began well before the recession. Measured between the last two peaks in the business cycle, 1973 and 1979, regional manufacturing employment grew at less than 1.0 percent per year, compared with an annual rate of 3.3 percent between the previous two peaks, 1969 and 1973.

Will manufacturing growth continue to slow? Will it decline? Or, will the comparative advantages of the region that led to the growth spurt of the 1960s and early 1970s reassert themselves?

There is no single, dominant factor that explains the slower growth of manufacturing in recent years. Slower capital formation, increased energy costs, rising regional wages, stronger foreign competition, and the changing technology of manufacturing each played a role. However, we believe that manufacturing will remain an important sector of the regional economy and a larger part of the economy in the Tennessee Valley than in the nation considered as a whole. The hangover from the dismal economic performance of the early 1980s will end eventually and growth in manufacturing output and employment resume, but at a more moderate pace than was experienced in the 1969-to-early-1970 period. To explain this forecast, this article examines long-term trends in the Tennessee Valley manufacturing base, looking for both explanations of its slower growth in the late 1970s and implications of this slowdown for the future.

The Role of Manufacturing in the Tennessee Valley

The rapid growth of manufacturing in the TVA region through the 1960s and early 1970s is recorded in Table 1. Employment grew 5.0 percent per year from 1960-1969 and 3.3 percent per year from 1969-1973. Production grew 8.4 percent per year from 1969-1973. Rates of growth fell off sharply in the 1973-1979 period and became negative during the 1980-1982 recession. However, more disturbing is the comparison to the U.S., also shown in Table 1. Between 1960 and 1973, the region clearly outperformed the nation in manufacturing growth. But this lead virtually disappeared after 1973, and the TVA region did worse than the nation over the course of the latest recession.

Table 1
MANUFACTURING GROWTH RATES IN THE U.S. AND THE TENNESSEE VALLEY, 1960-1982
(Percent Per Year)

	Employment			Production		
Years[1]	U.S.	TVA	Difference[2]	U.S.	TVA	Difference[2]
1960-1969	2.1	5.0	2.9	5.5	N.A.	N.A.
1969-1973	0.0	3.3	3.3	3.0	8.4	5.4
1973-1979	0.6	0.8	0.2	2.7	2.8	0.1
1979-1982	-3.5	-3.9	-0.4	-3.0	-3.9	-0.9

[1] End years measure periods between peaks in the business cycle, except 1979-1982, which is peak to trough of the most recent recession.
[2] TVA minus U.S.
N.A. = not available.

Why did manufacturing in the Valley grow so rapidly in the 1960s? Perhaps the key factor was a widespread trend toward the standardization and simplification of manufacturing processes. Most industries pass through a life cycle. After a product matures, it no longer undergoes frequent design changes. The manufacturing process becomes routinized, standardized, and no longer requires skilled hand operations or the oversight of an engineering staff. Many manufacturing processes "matured" in the 1960s, and firms exploited the opportunity that standardization afforded them to cut production costs by locating production facilities in small cities or rural areas where construction costs, wages, and taxes were lower.[4] The low wages of the Tennessee Valley, like the rest of the rural South, proved a magnet for manufacturing development during this decentralization of U.S. industry.

The length and extent of this boom in the region was primarily due to the unusually large amount of surplus labor available in the Tennessee Valley at the time. The U.S. had been undergoing a major transfer of employment from farm to factory throughout the twentieth century.

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The TVA region participated in but lagged behind this trend, so that 20.0 percent of the Valley's work force was still on the farm in the late 1950s—compared to fewer than 10.0 percent left on the farm as an average nationwide. By 1973, as the manufacturing boom apparently peaked, only 5.0 percent of the region's work force was still left on the farm, a figure more in line with the 4.0 percent rate in the U.S.

A second important factor was that the expansion of job opportunities in the Tennessee Valley drew many new workers into the labor force. In 1959, 62.0 percent of the Valley's working-age population was employed; by 1973, 75.0 percent of those of working age held jobs. In addition, as a consequence of the manufacturing boom, the region's long history of outward migration ended in the 1970s, and the region began to draw workers from outside the Tennessee Valley.

Surprisingly, the tapping of the region's rural labor surplus and the expansion in the proportion of the working age participating in the labor force was accomplished without an increase in relative wages. Manufacturing wages held steady in the Tennessee Valley at about 78.0 percent of the U.S. average from 1959 to 1973. Thus, the region's specialization in manufacturing was a result of elastic labor supplies, allowing the manufacturing expansion to continue for over a decade without bidding relative wages upward—despite a sizable and sustained increase in demand for the services of the region's workers.

Long-Term Patterns of Manufacturing Growth

Over the next two decades, what factors will shape the pattern of manufacturing growth in the Tennessee Valley? The current Tennessee Valley Authority forecast for manufacturing employment and production is summarized in Table 2. It foresees continued manufacturing growth in the region, at rates that will once more exceed those of the U.S. Between 1979 and 1985, the hangover from the current recession and the uneven impact of macroeconomic policy in the Tennessee Valley[5] are expected to slow manufacturing growth and temporarily depress it below national norms. However, relatively healthy growth is anticipated to resume after 1985—at rates well below those of the 1960s and early 1970s, but above the 1973-1979 period (see Table 1). From 1985 to 2000, the manufacturing base of the region is expected to again grow faster than the U.S., averaging 1.0 percent per year faster in employment and 1.4 percent per year faster in production growth. This forecast of future growth results from our analysis of electricity rates, wages, foreign competition, and changing manufacturing technology, which is summarized in subsequent sections.

Electricity Rates and Manufacturing Growth

The late 1970s was a traumatic period for the U.S. economy. Chronic inflation, falling productivity, foreign competition, and a succession of energy price shocks all contributed to slow and uneven growth. In the Tennessee Valley, a region of historically cheap electricity, the sharp increases in TVA electric rates reflected, and contributed to, this turmoil. TVA's rates for its largest customers from 1970-1981 are shown in Table 3. In 1970, TVA's industrial rates were twice the remarkably low rates of the Bonneville Power Administration (BPA), but still only half those of large, coal-fired utilities serving significant industrial loads in the Midwest. By 1981, TVA's rates were five times those of BPA and even slightly higher than those of the Midwest coal-fired plants.

Table 2
MANUFACTURING GROWTH RATES IN THE U.S. AND THE TENNESSEE VALLEY, FORECAST FOR 1979-2000

	Employment			Production		
Years	U.S.	TVA	Difference[1]	U.S.	TVA	Difference[1]
1979-1985	-0.9	-0.5	0.4	1.1	1.4	0.3
1985-1990	0.2	2.1	1.9	2.7	5.2	2.5
1990-2000	0.0	1.0	1.0	2.7	4.0	1.3
1979-2000	-0.2	0.8	1.0	2.2	3.6	1.4

[1] TVA minus U.S.

Source: Chief Economist Staff, Tennessee Valley Authority, *Economic Outlook* (July 1983).

Table 3
RATES PAID BY LARGE INDUSTRIAL CUSTOMERS FOR ELECTRICITY
(Cents/kWh)

Utility	Rates Paid By:	1970	1975	1980	1981
TVA	Large industry[1]	0.48	1.04	2.71	3.22
BPA	Large industry[1]	0.20	0.25	0.40	0.61
Four large, coal-fired utilities[2]	All industry	0.91	1.73	2.62	2.87
U.S.[3]	All industry	0.95	1.92	3.41	4.02

[1] Directly served industry.

[2] The four utilities chosen all are in the Midwest and serve large industrial loads.

[3] Investor-owned utilities only.

Sources: Tennessee Valley Authority, *Annual Reports*, various years, 1970-1981; Bonneville Power Administration, *Generation and Sales Statistics*, various years, 1970-1981; Edison Electric Institute, *Statistical Yearbook of the Electric Utility Industry, 1981*; Compustat and personal communications with Data Resources, Inc., provided the data on the four coal-based utilities.

Several factors were responsible for these increases. First, during the decade TVA had to finance its construction program by borrowing in capital markets where interest rates rose sharply in the 1970s—rather than as in the past, relying upon interest-free appropriations from the federal government. Second, much of the rest of the electric utility industry began to share with TVA the efficiencies and economies of being large, integrated power systems. Third, the demand in the region outgrew its hydroelectric generating potential, resulting in nearly 90.0 percent of TVA power being coal or nuclear in origin by the end of the decade. As coal prices escalated during the inflation-plagued 1970s, so did the cost to TVA of producing electricity. Moreover, because the legislation that created TVA requires that all the benefits of hydroelectric generation be allocated to residential consumers, so far as

TVA's industrial customers are concerned, TVA is strictly coal- and nuclear-based with no direct hydroelectric benefits.

However, we believe that, although rising electric rates contributed to the manufacturing slowdown of the 1970s, they should be assessed only a modest role.

The TVA region attracted several large electricity-consuming industries in the 1950s and 1960s through the low electric rates prevailing at the time. Primary aluminum, ferroalloys, chlorine, and phosphorus are all industries with costs dominated by electric rates, industries that have traditionally located where cheap, surplus electricity could be found. The cheap hydroelectricity of the Tennessee and Columbia rivers, natural gas in the Southwest, and coal in the Midwest geographically concentrated these industries in a few energy-rich regions. It is these "electricity-seeking" industries that have been most affected by rising electric rates.[6]

These highly electric-sensitive industries, however, contributed only modestly to manufacturing employment and output growth in the 1960s and 1970s. They are indeed economically important to the region, providing some of its best-paid jobs, but they have not been the mainspring of economic growth for at least two decades. As Table 4 shows, from 1960-1969 the region created an average of 26,807 additional manufacturing jobs each year. From 1969-1973, it created an average of 23,556 additional jobs each year. But from 1973-1979, an annual average of only 6,128 additional manufacturing jobs were created. The electricity-sensitive industries—aluminum, ferroalloys, chlorine, and phosphorus—contributed only 15.0 percent of additional jobs in the 1960 to 1969 period and considerably fewer in both relative and absolute terms after that.

The other industry groups shown in Table 4—traditional Southern low-wage industries; machinery and transportation equipment; and construction-sensitive industries—like the electric-sensitive grouping, have been or are potential trouble spots in the manufacturing sector. From 1960-1973, these four industrial groups created 65.0 to 80.0 percent, depending on the year, of the region's additional manufacturing jobs. But from 1973-1979, they contributed only 26.0 percent of a much smaller number of additional jobs. Employment growth shifted to food processing, paper, printing and publishing, and other general manufacturing industries. If low-wage and construction-sensitive industries (neither of which are influenced very strongly by electric rates) had remained healthy, the employment impact from the slow growth of the electric-intensive industries would have been barely noticeable.

In evaluating the impact of electric rates on manufacturing growth in the future, it is important to recognize that the Tennessee Valley was only the first of the nation's oases of cheap, domestic power to dry up. The others have now followed. The nuclear construction problems of the Washington Public Power Supply System (WPPSS) have ended the era of remarkably low rates in the Pacific Northwest; natural gas price decontrol begun in 1978 has done the same for the Southwest. Thus, there are few, if any, domestic alternatives for these electricity-seeking firms. The realistic alternatives for new plant construction in these industries are concentrated in Canada. Canada has surplus hydroelectricity, is politically "safe"—in contrast to Brazil or the Middle East—and it is located near North American markets. Canadian electricity may be a limited resource for these industries, however, and it is not likely to displace existing U.S. capacity.

TVA's competitive rate position is expected to continue to improve in the future. TVA's current rate forecast indicates that by 1990 its industrial rates will be among the lowest in the Southeast and its residential rates among the lowest in the U.S. Price stability in coal markets, reduced employment, and a scaled-back nuclear construction program are likely to keep future TVA rate increases at or below those of other utilities. Thus, we believe escalating electric rates in the TVA region will not be a drag on manufacturing growth in the future.

Construction-Related Manufacturing

A second group of industries that were contributors to the slowdown in regional manufacturing growth between

Table 4

JOB CREATION IN THE TVA REGION BY SELECTED GROUPS OF INDUSTRIES[1]

Year	Total Manufacturing	Low-Wage	Construction-Sensitive	Machinery and Transportation Equipment	Electricity-Sensitive	All Groups
			Average Annual Additional Manufacturing Jobs Each Year, Selected Periods, 1960 to 1979			
1960-1969	26,807	8,482	1,842	7,905	4,012	22,241
1969-1973	23,556	8,572	3,669	7,163	- 667	16,134
1973-1979	6,128	-3,277	581	4,489	484	1,592
			Percent of Manufacturing Jobs Created			
1960-1969	100.0	31.6	6.9	29.5	15.0	83.0
1969-1973	100.0	36.4	15.6	30.4	- 2.8	68.5
1973-1979	100.0	-53.5	9.5	73.3	7.9	26.0

[1] Low-wage industries are lumber, furniture, textiles, apparel, and leather; construction-sensitive industries are wood, lumber, and stone, clay, and glass; machinery includes both electric and nonelectric machinery and is added to transportation equipment; electric-sensitive industries are primary metals plus chemicals. The total of "All Groups" excludes any overlap in these definitions.

1973 and 1979 are those related to construction activity. The construction industry in the TVA region and the U.S. exhibited relatively little growth in output or employment in the mid-to-late 1970s.

Interest rates rose sharply with the inflationary surge of the late 1970s, pushing up the cost of housing and forcing many customers out of the home market. Interest rates rose even more sharply in 1979, as monetary policy was used as a cure for inflationary expectations. A construction industry that was stagnant in the late 1970s became badly depressed during the 1980-1982 recession.

The problems of the construction industry are transmitted directly and quickly to the manufacturing sector. Table 4 shows 2,500 new jobs created each year in construction-related industries from 1960-1973 but a sharp slowdown to 581 new jobs per year from 1973-1979. Fortunately, this pause in construction is a cyclical phenomenon, with longer term trends in construction related closely to growth in population and personal income. Interest rates are not expected to escalate again as the current economic expansion progresses because, for the first time in four years, the current monetary targets of the Federal Reserve System are consistent with the price, production, and productivity trends in the overall economy. Thus, we anticipate a modest resurgence, or at least revival, of construction activity. A revival of construction-related manufacturing should follow fairly quickly.

Rising Wages in the Tennessee Valley

If low wages were the primary lure that drew manufacturing to the TVA region, have wage increases been the brake on its recent development? Rising wages bring other important rewards, but they can also make a region less attractive for industrial development. As Table 5 shows, there was substantial stability in relative wages from 1959-1973, with regional wages averaging a very steady 78.0 percent of U.S. levels in all sectors including manufacturing.[7] As discussed previously, this 22 percentage-point differential—and its failure to close with rapid growth—was a key to the region's manufacturing development.

Table 5
WAGES AND SALARIES PER EMPLOYEE[1] IN THE TVA REGION RELATIVE TO THOSE OF THE U.S., 1959-1979
(Percent)

	Year			
	1959	1969	1973	1979
Manufacturing wages	77.9	77.9	77.6	80.1
Wages in all sectors	77.6	76.7	78.0	82.4

[1] Wages, salaries, and nonfarm proprietors' income divided by the total number of workers or proprietors.

After 1973, however, the historic relative wage stability of the region weakened. Wages relative to the U.S. rose 4.4 percentage points in all sectors and 2.5 percentage points in manufacturing between 1973 and 1979. Although statistical evidence on inflation in the TVA region is spotty,[8] it seems likely that these relative wage increases are real—i.e., they are not merely reflections of higher living costs. There is little evidence that inflation from 1973-1979 affected the Tennessee Valley differently than the U.S., and if proper price deflators were applied to the wage data used to compute the values shown in Table 5, relative wages would still have increased by a similar amount.

The available price data indicate that the cost of living in the Tennessee Valley remains at 90.0 percent or so of the U.S. average. This means that perhaps half of the apparent 20.0 percent wage differential between the Valley and the U.S. is explainable by lower living costs. Differences in skill levels or education may explain some part of the remaining difference, but no studies have suggested that the Southern worker is nearly that much less productive than his counterpart elsewhere. Thus, a 10.0 percent *real* differential in wages remains, and the Tennessee Valley continues to offer a pool of relatively inexpensive, productive labor. Closing this differential by perhaps one or two percentage points in the 1970s, as the data suggest, is not a persuasive explanation of a widespread slowdown in the region's industrial growth, or to be enough of an increase to foreclose future development. Therefore, rising relative wages, like electric rates, may be one part of the explanation of slower manufacturing growth in the Valley, but it cannot be assessed a dominant role.

Losses to Foreign Competition: A Grain of Salt for the Conventional Widsom

The U.S. has been badly hurt by foreign trade in some key manufacturing sectors—steel, autos, consumer textiles, and apparel among them. It has run chronic deficits in merchandise trade because of oil imports. However, to narrowly focus attention on these few sectors (even if they have forced some widespread industrial adjustments) is to ignore the solid competitive position the U.S. maintains in foreign trade.[9] The U.S. no longer dominates world trade as it did after World War II, it does not run huge trade surpluses in manufacturing goods like the Japanese, and deficits in primary goods continue because of oil imports. To balance this view, however, it should be recognized that the breakdown of the Bretton Woods system in 1973 caused the dollar to depreciate by 25.0 percent and returned U.S. labor costs to a strongly competitive international position by the mid-1970s. Throughout the 1970s the U.S. ran small surpluses in manufactured goods; its deficits in oil were largely offset by grain exports, unlike Japan or the European Community. Moreover, the U.S. share of the world's total production, output of manufactured goods, and employment was stable throughout the 1970s. Thus, any explanation of how foreign competition hurt the TVA region has to be specific to those sectors that were indeed hurt by imports. Sustained U.S. surpluses in manufactured goods make it an unpersuasive explanation of overall decline.

The problems of industries that are widely perceived to have been hurt by competition from abroad do not translate automatically into problems in the Tennessee Valley even though the industry may be well represented in the region. For example, the primary metals industry epitomizes the type of "smoke stack" industry that has been the focus of concern about the weakening competitiveness of U.S. manufacturing. At the core of this concern are the high relative costs of the country's large, integrated steel producers. The Tennessee Valley's primary metals industry, however, is heavily weighted toward aluminum, with only one-fourth of its payrolls in steel; and the iron and steel segment is largely composed of small, modern "mini-mills" serving local markets and using advanced, competitive technology.

On the other hand, despite overall stability of textile imports at 5.0 percent of the U.S. market, some consumer textile and apparel industries clearly have been hurt badly by imports. Carpets and rugs are one example of this in the TVA region, with imports growing from 2.0 to 5.0 percent of the market in the 1970s. But the heart of the TVA region's textile industry is in synthetic fiber production and knitwear; these sectors have thus far proven relatively immune to foreign competition. The bulk of the apparel production in the Tennessee Valley is men's and women's outerwear, and imports rose in the 1970s from 7.0 to 15.0 percent of the domestic market. The rise of the "Gang of Four"--Korea, Taiwan, Hong Kong, and Singapore—as manufacturing powers meant that the region's relatively cheap domestic labor lost to even cheaper labor in these rapidly developing nations.

Problems in the textile and apparel industries have almost certainly hurt the job-creating potential of the TVA region. It can be seen in Table 4 that low-wage industries, which include textiles and apparel, created 8,500 jobs per year from 1960 to 1973. From 1973 to 1979, there was a net *loss* of 3,300 jobs each year, with textiles responsible for over half the annual losses and apparel responsible for another 25.0 percent.

Care must be taken in interpreting this result, however. In both the Tennessee Valley and the U.S., *production* has continued to rise in both industries. This is because of productivity gains due first to new production methods and capital equipment, and second, to the transfer of the most labor-intensive segments of these industries to other countries. Further, the rate of job loss to the region has not been as severe to the U.S. as a whole for the apparel and textile industries. Measured in proportion to employment in the two industries, the U.S. lost two and one-half times as many jobs as did the Tennessee Valley. On balance, this means that although jobs were lost, the jobs that were left tended to be higher paying ones with a better future and chance to survive the challenge of international competition. In the future we expect that the Valley's wage and other advantages will lead to a resumption of modest growth in the "traditional low-wage" industries, but this forecast must be considered one of the cloudiest parts of the always murky future.

The Evolution of Manufacturing Technology: The Valley's Future Challenge

As described above, the story of American manufacturing in the 1960s was the transition to standardize and routinize production. Skill levels were reduced, cheap labor and rural locations were sought to cut operating costs, and manufacturing was dispersed away from corporate headquarters and urban areas. This decentralization of standardized manufacturing processes combined with the Tennessee Valley's less costly labor and other advantages to bring about rapid regional growth. However, much of the rest of the world also learned these lessons quickly, as standardized manufacturing became widely used on an international scale. Just as manufacturing dispersed throughout the U.S. in the 1960s, it dispersed throughout the world in the 1970s.

Many believe that the story of manufacturing in the 1980s and 1990s will be one of using new technology in flexible ways to produce more "knowledge-intensive," specialized products. Table 6 divides U.S. manufacturing trade balances into nonresearch-intensive and research-intensive categories, as defined by the Council of Economic Advisers. Nonresearch-intensive manufactures were a steady contributor to trade deficits through the 1970s but held their own in the sense that the deficits deteriorated modestly as a percentage of GDP from 1972-1979. In contrast, research-intensive manufactures were a strong contributor to trade surpluses in the 1970s, and these surpluses increased by 75.3 percent if measured as a fraction of GDP. If this trend continues, it suggests that the U.S. will slowly shift its manufacturing base away from standardized manufacturing and toward a mix featuring more flexible, research-intensive manufacturing.

Table 6

U.S. MANUFACTURING TRADE BALANCES AS A PERCENT OF GROSS DOMESTIC PRODUCT, 1972-1979

	1972	1979
Nonresearch-intensive manufactures	-1.27	-1.44
Research-intensive manufactures	0.93	1.63
Total manufactures	-0.34	0.19

Source: Council of Economic Advisers, *Economic Report of the President* (Washington, D.C.: USGPO, 1983), Table 3-4, p. 58.

According to this view, the new flexible manufacturing systems will not be locked into long runs of standardized goods. They will make small volume, high quality, highly specialized goods. They will seek new niches created by evolving technology and quickly adapt to changing markets. To make these small runs, the flexible factory will be home to automated controls, microcomputers, new materials, and new technologies. Production flow and rates will be by computer-assisted numerical controls combined with robotics. It will be the application of high technology to current production.

Such an evolution of manufacturing clearly would leave the Tennessee Valley at a crossroads. Despite its huge manufacturing base, it has had little success in drawing corporate headquarters with their research and engineering functions to the region. Funding for education at all levels badly lags the rest of the nation, and research activity, although certainly not absent, clearly is less prevalent in the region than in the nation. The Valley's economic history has been strongly tied to less costly labor and standardized manufacturing. The evolution of flexible systems and higher skills will develop slowly but will present the TVA region with the challenge—and opportunity—of upgrading its work force to meet the requirements of the modern factory. Old manufacturing jobs will not disappear rapidly, but new jobs will increasingly require a higher level of training and skills than has been the case in the past.

Conclusion

The manufacturing base of the Tennessee Valley is unlikely to return to the rapid growth experienced in the 1960s and early 1970s. Several factors are responsible for the slower growth experienced in recent years—high interest rates, rising electricity rates, rising wages, and foreign competition. However, manufacturing can be expected to continue to play a major role in the TVA region's economic development. The Tennessee Valley has the advantages of a sunbelt climate, excellent transportation, an extremely pleasant environment, and location near the Midwest industrial belt. Electricity rates are unlikely to disrupt this growth, and a pool of productive labor is available at favorable wages. A revival of construction activity will accompany economic recovery. The region has lost some of its industry to foreign competition but generally has proven more resilient to imports than its specialization in relatively low-wage manufacturing might suggest.

The major question that overhangs the future of the TVA region's manufacturing base is its ability to move out of standardized manufacturing, as the nation's manufacturing growth seems likely to turn toward more research-oriented, more flexible factories. The region's manufacturing base has been built on cheap labor and standardized manufacturing. As a major industrial region of the U.S., however, it seems likely that these applications of high technology will make inroads in the region's factories; the Tennessee Valley must evolve with the nation away from old production methods. There is an inherent risk to a forecast of rapid growth for the TVA region if it fails to make the transition. Provision of the necessary skills for future factories offers the region a real challenge in upgrading its work force, but it is also an important opportunity for improving wages and the standard of living in the Tennessee Valley. Successful adaptation of new technologies, new production methods, and new skills by Tennessee Valley industries can ensure the manufacturing sector a vital part of the region's future.

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[1] The material discussed in this article is abstracted from TVA's annual *Economic Outlook* (July 1983) which provides forecasts and analysis of economic conditions in the Tennessee Valley. Copies of the entire document can be obtained by writing Chief Economist Staff, Tennessee Valley Authority, 400 W. Summit Hill Drive, E4D100, Knoxville, Tennessee 37902.

[2] References to the Tennessee Valley and TVA region are used interchangeably to refer to the TVA power service area. This incorporates 170 counties in a seven-state area, including Tennessee, significant parts of northern Alabama, northern Mississippi, and southern Kentucky, and smaller parts of Georgia, North Carolina, and Virginia.

[3] The 1980-1982 recession saw output and employment in the TVA region contract far faster than in the U.S. as the recession progressed. The depth of the region's setback is largely explained by the preponderance of interest-sensitive industries in the region, plus the failure of fiscal stimulus from tax cuts and increased defense spending to help the region as much as the U.S. Several studies point to the high interest sensitivity of both the TVA region and other southeastern states. Calculations of the authors indicate that the Tennessee Valley may have received only about half the benefit of tax cuts and defense spending as the nation as a whole. A more complete discussion is available in the TVA *Outlook* cited above. Because the depth of the setback to manufacturing in this recession seems to be *cyclical* and not of concern to long-term developments, it is not discussed in detail in this article.

[4] J. Hekman and Alan Smith, "Behind the Sunbelt's Growth: Industrial Decentralization," *Economic Review* (March 1982), pp. 6-7.

[5] See note 3 above.

[6] For further discussion of electricity-seeking industry, see R. W. Gilmer, "Regional Electricity Costs and the Aluminum Industry," *Texas Business Review*, Vol. 57 (November/December 1983).

[7] The TVA region did have levels of personal income that converged steadily to U.S. levels. In 1959, personal income in the TVA region was 67.0 percent of the U.S. average; by 1979, it was 78.0 percent. Table 5 makes clear that rising wages played a modest role in covergence. A bigger labor force, rapid increases in labor force participation, and increased transfers into the region are the major reasons for rising relative personal income. An analysis of the factors that have made personal income grow in the Tennessee Valley is found in TVA's *Economic Outlook*.

[8] The price data available were from the Consumer Price Index for South versus non-South comparisons, family budget data relating to regional living costs, and price surveys conducted by the American Chamber of Commerce. They are not definitive concerning the Tennessee Valley, but they are consistent with living costs in the TVA region rising at much the same rate as the U.S. This stability is due to offsetting trends—housing prices rose sharply in the nonmetropolitan South throughout the 1970s relative to the U.S., but they were offset by the lower tax burden imposed by state and local governments.

[9] The strong competitive position of the U.S. is reiterated in William H. Branson, "Industrial Policy and U.S. International Trade," in M. L. Wachter and S. M. Wachter, *Toward a New U.S. Industrial Policy?* (Philadelphia, PA.: University of Pennsylvania, 1981), pp. 378-408; and Council of Economic Advisers, *Economic Report of the President* (Washington, D.C.: USGPO, 1983), pp. 52-66.

HUMAN LIFE VALUE CALCULATIONS: A COMPARISON OF THE *PENROD* AND *CULVER* DECISIONS

*Charles N. Dennis, H. Tyrone Black, and William A. Sirmon**

INTRODUCTION

In September 1982, the United States Court of Appeals for the Fifth Circuit reversed itself on the admissibility of testimony by economists as to expected future inflation in cases involving injury or wrongful death. The 1982 *Culver v. Slater Boat Co. et al.* decision[1] (hereafter referred to as the *Culver* decision) overturned the court's 1975 ruling; this 1975 *Johnson v. Penrod Drilling Co.* decision[2] (hereafter referred to as the *Penrod* decision) had prohibited any consideration of inflationary factors in ascertaining damages for the loss of future wages. More recently, the United States Supreme Court in its *Jones & Laughlin Steel Corp. v. Pfeifer* decision[3] (hereafter referred to as the *Pfeifer* decision) addressed the issue of how projected inflation should be incorporated into calculations of damages for lost income, and, in general, the alternative approaches for including inflation permitted by *Culver* are also permissible under *Pfeifer*.

Under *Penrod* the economist was often placed in the position of applying questionable economic assumptions in order to conform to the legal precedent established by the *Penrod* decision. The result of the *Culver* and *Pfeifer* decisions will be to put the process of determining damages for wrongful death or injury on a firmer economic foundation. Hence, the focus of this article is on how the role of the economist is affected by the overturning of *Penrod*. The important general issue of ethics for the economist is examined, showing that the restrictions established by *Penrod* often created an ethical dilemma. An illustration is given of the damage estimates permitted under *Penrod*, and a description is presented of how the *Culver* and *Pfeifer* decisions permit a more rational and ethically defensible role for the economist.

THE ECONOMIC EXPERT

Economists, particularly in academic professions, frequently assume the role of experts in legal proceedings. One of the more common situations arises when an economist is requested to calculate human life value in cases involving wrongful death or injury.[4] The following case is assumed for the purpose of illustration: Mary's husband, John, was killed while working for John's employer, the XYZ Corporation. The resulting lawsuit, initiated by Mary (the plaintiff) against XYZ Corporation (the defendant) for negligently permitting work in an unsafe environment, has two elements. First, XYZ Corporation's negligence must be proved; however, the economist usually has no role in this first element of the case. The second element involves making an estimate of the economic damages; these damages involve the wages that John would have earned had he not been wrongfully killed.

Since the plaintiff's case must establish the dollar amount of damages, it is likely that an economist will be retained to perform the calculations. Often the defendant also will retain an economist either to present formal testimony on human life value or simply rebutt the plaintiff's economist, thus setting the stage for conflict between the two experts. However, the defendant's economist often assumes the role of an advisor to the attorney and thereby avoids the battle of formal testimony. In this advisory role, the expert may prepare cross-examination questions for the defendant's attorney, who then proceeds to make his points through cross-examination of the plaintiff's economist.

In defining the role of the economist in wrongful death cases, impartiality should be the key element. The conflict should be between economic points of view, not between experts presenting those points of view. For most academic economists, testimony as an expert witness is an opportunity to descend from the ivory tower in order to aid society in a practical situation. The "aid to society" in this situation is assigning an economically justifiable value to the lost wages of the decedent in such a manner that the decedent's estate is justly compensated and, similarly, that the negligent defendant pays the just amount. Of course, in addition to compensation for lost wages, the jury also may award punitive damages when the defendant is reckless or grossly negligent in causing the plaintiff's death. However, punitive damages normally are not in the domain of the economist's expertise.

The academic economist must remain impartial even though he is retained by an attorney whose ethical role is to obtain the best result for his client. The defendant's attorney will desire a low damage award, while the plaintiff's attorney will strive for a high reward; but the

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economist cannot be swayed by these biases. There are economists who have rationalized their biased roles by saying that they are plaintiffs' economists, not defendants' economists. These economists use assumptions which result in the highest possible damage awards and consequently find themselves in demand by plaintiff attorneys. Recall that while the plaintiff must prove damages, the defendant has no such burden of proof. This requirement of proof of damages by the plaintiff ensures a higher probability that the economist's role will be on the plaintiff side of the case. What better way for the economist to build a profitable consulting business than to do a "good" job for "his attorney." Being a plaintiff's economist in this sense is to cause a significant disservice to society. When the economist prostitutes himself in this way, a misallocation of resources often results in the form of an overpayment of the expected future wages to the plaintiff by the defendant.

The proper role of an expert economist is to be neither a plaintiff's economist nor a defendant's economist. The economist is *not* a lawyer trying to win an award for a client, and he receives no contingent fee based upon the outcome of the case. The proper role is to be an expert who is paid a predetermined fee for an impartial viewpoint. The economist is a resource for the jury and judge, and even though he is paid by one of the two sides, the calculations of lost wages should be identical whether the economist was retained by the plaintiff or the defendant.

Under *Penrod*, the battle lines between the two possible economic points of view, plaintiff and defendant, were rather well defined. Unfortunately, *Penrod* also caused an economic-legal dichotomy. As in many legal situations, case law set the parameters for the admissibility of evidence which prevented sound economic principles from being applied to the lost wages calculation.

INFLATION: THE VIEW OF THE COURT UNDER *PENROD*

On March 21, 1975, the United States Court of Appeals for the Fifth Circuit found that expected future inflation could not be considered in the calculation of lost wages in wrongful death cases. In addition, the court directed that income taxes on lost wages, income taxes on interest generated by the investment of the present value of the cash award, and contingent attorney fees (usually between one-third to one-half of the award) were to be withheld from the jury's consideration. The lost-wage calculation was to be based on the decedent's gross (not take-home) wages over his work life expectancy at an interest rate (discount rate) ". . . prevailing at the time and place of trial."[5] In short, the decedent's lost wages were the present value of his gross wages over his work life.

Information about gross wages at the time of death was usually supplied to the economist from the decedent's tax return or by his employer. The gross wages at the time of death were permitted to be increased over the work life by three factors: productivity, promotions, and merit. Perhaps it would be more correct to state that these three factors were not explicitly excluded from the economist's testimony since there were no requirements that they be considered, and in many cases they were not. Of course, inclusion of these items hinged on identifying good data sources. The Bureau of Labor Statistics publishes data on national productivity, but other than direct testimony in each case, there was usually no satisfactory data source for the decedent's expected merit increases or promotions. Moreover, even the national productivity data often were attacked on grounds of lack of specificity. Consequently, productivity adjustments had to be made giving careful consideration to such factors as national versus regional differences, occupational variances, age-education characteristics, etc. Finally, because of the paucity of data on merit and promotion trends, adjustments for these factors almost always were attacked as being speculative.

Under *Penrod*, to be on defensible footing for cross-examination, the economist often assumed that gross wages at the time of death would remain constant over the decedent's work life, an assumption that by ignoring the adjustments discussed above, flies in the face of common sense. By using constant gross wages and work life (easily obtainable from Bureau of Labor Statistics tables[6]), the economist's calculation became relatively straightforward. The other variable, the interest rate at the time and place of trial, was to be used to discount the stream of lost wages. The rate was to be a market rate, not a real rate, that is, an inflation-adjusted rate. Thus, while the court under *Penrod* had explicitly excluded expected future inflation from the decedent's wages, nevertheless it implicitly had kept expected future inflation in the discount rate by requiring a market rate. Consequently, future expected wages were too low since they excluded inflation and could not be adjusted for fear of reversible error being introduced on appeal; on the other hand, the discount rate was too high since it was a market rate which would include inflationary expectations. Hence, the economist's dilemma.

Economists were given some flexibility in their choice of the discount rate. With gross wages and work life defined, the present value of future expected wages over the decedent's work life became a function of the discount rate. A plaintiff's economist under pressure to produce a large damage award could utilize a low discount rate such as the passbook rate available at a local bank, but the defendant would argue for another interest rate such as the rate on long-term United States government bonds. Assume that the trial took place in early 1982 when the long-term rate on United States Treasury obligations averaged 14.50 percent and the bank passbook rate was 5.25 percent. Further assume that the decedent was 29 years of age at the time of his death and, consequently, could have been expected to remain in the work force for 30 more years.

Table 1 shows that by using the passbook rate, the estimate of damages would be $10,461 for each thousand dollars of the decedent's gross wages at the time of death; the defendant, however, could argue that the discount rate should be the average of long-term United States government bond rates with the resulting award totaling only $4,744 per thousand dollars of gross wages. Thus, using the passbook rate results in an estimate of damages that is approximately 120.0 percent greater than the figure derived with the long-term bond rate. Both rates existed at the time and place of trial; nonetheless, the defendant might argue that the passbook rate was not a true "market" rate because of government-imposed interest rate ceilings on bank savings accounts. Also, the matter of whether a long- or a short-term rate is preferable is debatable.

Table 1
***PENROD* CASE:**
PRESENT VALUE OF $1,000 OF GROSS WAGES AT DEATH WITH NO ADJUSTMENT FOR PROMOTION, MERIT, PRODUCTIVITY, OR INFLATION (WORK LIFE 30 YEARS*)

Discount Rate	Present Value Per $1,000 of Gross Wages
5.25 percent	$10,461
14.50 percent	4,744

*All calculations in this and the following tables deduct 30.0 percent of gross wages for consumption by the decedent.

Using the 14.50 percent bond rate has a strong economic rationale and meets the letter of the law. However, it would be economically inconsistent to use a 14.50 bond rate, which clearly contains an inflation premium, and then not adjust gross wages for inflation. If wages are not inflation-adjusted, then the discount rate should not be a market rate, but should instead be a real or inflation-adjusted rate. However, *Penrod* prohibited consideration of inflation in the estimate of future wages, and the use of a real interest rate was effectively excluded by the requirement to use a market rate of interest (discount rate) at the time and place of trial.

If the economic expert had been permitted either to adjust wages for inflation or to estimate and use a real interest rate, then the economist's role would have been less open to compromise. Unfortunately, the court's decision in *Penrod* was economically irrational and frequently put the economist in an untenable position no matter which discount rate he used. It is interesting to note that under these circumstances, utilization of the real interest rate, which was usually assumed to be between 1.0 and 3.0 percent, would have generated results nearer those produced using the passbook rate than by discounting by a market rate such as the long-term bond rate. Therefore, the role of the economist during the *Penrod* period became that of a selector and defender of a discount rate, an impossible selection to defend given the constraints of *Penrod*. The passbook rate offended the concept of a *market* interest rate; on the other hand, a market rate used with unadjusted gross wages could greatly understate the proper award to the plaintiff for economic damages.

THE *CULVER* CASE: A NEW OPINION ON THE TREATMENT OF INFLATION

As noted in the introduction, the United States Court of Appeals for the Fifth Circuit overruled its 1975 *Penrod* decision by permitting inclusion of inflation in calculations of the economic loss resulting from wrongful death. Moreover, the United States Supreme Court in its recent *Pfeifer* decision examined alternatives for incorporating inflation into damage estimates. The following discussion describes two specific methods of treating inflation considered in *Culver* and *Pfeifer* and presents a third "preferred" procedure which is consistent with the guidelines set forth by the two decisions.

The Alaska Rule

In *Beaulieu v. Elliot*[7] the Alaska Supreme Court recognized that inflation and interest rates are related and concluded that the discount rate and the rate of inflation are virtually identical. Hence, under the Alaska rule, economists were instructed to calculate lost wages using a summation of future years' estimated earnings and not use present value techniques: this procedure is referred to as the "total offset" rule in the *Pfeifer* decision.

The appropriateness of the Alaska rule obviously hinges on evidence pertaining to the relation between interest rates and the level of inflation. As to this matter, the long-term record clearly shows that interest rates typically exceed the inflation rate. (Of course, the relation between interest rates and inflation will vary somewhat according to the specific price index and interest rate selected.) In estimating damages in wrongful death cases, the court chose the Consumer Price Index (CPI) as the best available gauge of inflation.[8] Selection of the appropriate interest rate for discounting is more controversial, however, as was indicated in the previous section. Nonetheless, when the rate of inflation as measured by the CPI is compared over a long time period to a variety of interest rates in order to determine the historical inflation/interest rate relation, the results indicate that the average interest rate level tends to exceed the rate of inflation.[9] The few years when this relation was reversed occurred during periods of unexpectedly high inflation—such as some years during the 1970s—but lenders eventually anticipate inflation and raise their interest rates accordingly.

Thus, since rates of interest historically have tended to be higher than the rate of inflation, the *historical* real rate of return, which is the difference between the interest rate and the rate of inflation, has, on average, been positive.[10] It follows, then, that since the average level of real interest rates is positive, using the Alaska method (which in effect assumes a zero percent real interest (discount) rate) will result in the payment of excessive damages.[11]

Continuing the example begun in Table 1, application of the Alaska rule would result in an award of $21,000 for our 29-year-old decedent.[12] The $21,000 Alaska rule award is approximately double the award under *Penrod* if the 5.25 percent passbook rate is used and is over 4.4 times greater than under *Penrod* when the long-term government bond rate is applied.

It is interesting that the United States Supreme Court in its *Pfeifer* decision expressed considerable sympathy with the "total offset" rule, primarily due to its simplicity of application. Also, in *Pfeifer* the court noted that there may be factors in addition to inflation, such as productivity growth, which act to "offset" the discount rate. Thus, while inflation does not normally offset the prevailing interest rate, the Court noted that inflation *plus* other forces (e.g., productivity growth) may come very near to doing so. However, the Supreme Court, feeling that it would be unwise to dictate a particular procedure to be used under a multitude of divergent circumstances, refused to establish the total offset rule as the only basis for determining all such damage awards.

We agree with the wisdom of the Court's refusal to select a particular procedure for dealing with inflation. For the particular example utilized in this article, the results of using the Alaska (total offset) method are considerably different from the results derived by using what we consider to be a preferred procedure for estimating damages. This preferred method is discussed after another technique for deriving damages, known as the *Feldman* approach, is presented.

The *Feldman* Approach[13]

The *Feldman* approach represents a compromise between the Alaska rule, which may be economically unfair to the defendant, and *Penrod's* procedure, which penalizes the plaintiff. Furthermore, the *Feldman* approach utilizes a more enlightened view of the relation between interest rates and the rate of inflation than that reflected by the Alaska rule. The *Feldman* approach specifically recognizes the concept of a real rate of interest, and the primary debate between economists focuses on the magnitude of the real rate.

While the Fifth Circuit in its *Culver* decision avoided a total endorsement of the *Feldman* approach, noting several weaknesses of the method, it did indicate that in a dynamic economy no perfect procedure is possible. The Court acknowledged that most experts would place the real rate of interest in a range of between 1.0 and 3.0 percent but left the calculation of a specific real rate to the economic expert.

The method to be used in determining the appropriate real rate was outlined by the Court as follows:

> First, find a time series of the effective annual interest rate on a relatively risk-free investment, e.g., a government bond.
>
> Second, match the time series above with Consumer Price Index (CPI) data, specifically, the annual percentage change in the Index.
>
> Third, subtract the CPI rate of change from the interest rate for each year, thus deriving historical annual real rates of return.
>
> Fourth, average the real rates of return in order to minimize unique or unusual events in atypical years.

The result is the average inflation-adjusted or "real" interest rate, which is to be used as the discount rate in the calculation of lost wages. The real interest rate will be used to discount the decedent's current wages, which should be adjusted for expected changes due to promotion, merit, and productivity, but not inflation, which was incorporated into the estimation process by using an inflation-adjusted discount rate.

The *Feldman* approach is used to estimate the present value of lost earnings for our hypothetical decedent in Table 2. In the table, discount rates of 1.0 and 3.0 percent are shown since these limits generally encompass most estimates of real interest rates which have been derived using the procedure described above. Both limits produce results which fall between the outcomes of the *Penrod* method (see Table 1) and the $21,000 amount obtained using the Alaska calculation.

Table 2
FELDMAN APPROACH:
PRESENT VALUE OF $1,000 OF GROSS WAGES
AT DEATH WITH NO ADJUSTMENT FOR
PROMOTION, MERIT, OR PRODUCTIVITY
(WORK LIFE 30 YEARS)

Discount Rate	Present Value Per $1,000 of Gross Wages
1.0 percent	$18,065
3.0 percent	$13,720

A PREFERRED METHOD

Neither the *Culver* nor the *Pfeifer* decisions dictate that a certain procedure be employed to incorporate the effects of inflation in calculations of damages for lost income. Both *Culver* and *Pfeifer* recognize that inflation should not be ignored, and both decisions also acknowledge that other factors such as promotion, expected merit, and productivity changes may also need to be considered. This section presents a "preferred" method of calculating damages that, while consistent with the guidelines laid down by *Culver* and *Pfeifer*, avoids some of the problems encountered with the approaches previously discussed in this article.

Under *Culver*, the major determinants of lost wages include the discount rate, the expected rate of inflation, and anticipated changes in merit, promotion, and productivity. With the *Feldman* approach, expected inflation is included via the real interest rate which is used to discount future wages adjusted for anticipated merit, promotion, and productivity changes. As previously noted, most experts would assign the real interest rate a value in the 1.0 to 3.0 percent range. However, the result of calculating an historical real rate is sensitive, among other things, to the particular interest rate series chosen and the number of years included in the calculations; consequently, considerable controversy exists regarding the real rate and how to estimate it.

If the preferred method is used, there is no need to "estimate" a discount rate since the expert can employ actual interest rates for riskless investment opportunities with maturities that match the decedent's work life expectancy. Consequently, the economic expert is able to replace an *expected* real rate with the *actual* current rate of return. Thus, the advantage of not having to use an estimate of the controversial real interest rate constitutes a strong argument in favor of the preferred method.

One version of the preferred method adjusts wages at the time of death successively for expected inflation, merit, promotions, and productivity. In Table 3, the previous example is extended by first adjusting the hypothetical decedent's lost wages for expected inflation.[14] The adjustment for inflation was based on the 1961-1981 average annual increase in the Consumer Price Index (CPI), which amounted to 5.71 percent; the discounted present value of this income stream is $12,019, a figure lower than the present values obtained using either a 1.0 or a 3.0 percent discount rate (see Table 2). The second present value estimate listed in Table 3 includes an adjustment for productivity increases; for the 1961-1981 base period, productivity increases in the private business sector averaged 2.03 percent. The resulting discounted present value, including expected inflation and expected productivity increases, is $15,469. While merit and promotion are to be considered under *Culver*, there is no attempt to include them here since they are beyond the scope of this discussion, whose focus is primarily the controversy resulting from the *Penrod* and *Culver* decisions over the treatment of inflation.[15]

Hence, the estimated effect of inflation and productivity can be entered *separately* by utilizing historical evidence on each of these factors. However, an alternative, which is preferable, captures the impact of both these influences in a single measure. By using wage trends, the economist avoids having to make separate estimates of inflation and productivity and additionally captures factors such as demand-side forces that would not otherwise be included. Furthermore, wage data can be made more occupation- and location-specific than if inflation and productivity are estimated separately. Table 3 (see entries 3-7) includes several discounted present value estimates that utilize historical wage trends for the period 1961-1981, and all of these estimates are location- and/or occupation-specific.

CONCLUSION

The result of *Culver*, and more recently *Pfeifer*, is to rationalize economic calculations in wrongful death. The economist now has the opportunity to make his calculations based on sound economic principles. With this opportunity comes the realization that the opposing economist is free to challenge the estimates of damage unfettered by irrational legal constraints. *Penrod* with its lack of economic logic is gone, and in its place come added responsibility and a greater need for the economist to exercise sound judgment.

Table 3
THE PREFERRED METHOD:
PRESENT VALUE OF EACH $1,000 OF GROSS WAGES AT DEATH—
NO ADJUSTMENT FOR PROMOTION OR MERIT, WORK LIFE 30 YEARS
(Discount Rate = 10.0 Percent)

Adjustment	Basis for the Adjustment	Magnitude of the Adjustment (Average Annual Rates of Change for 1961-1981) (%)	Resulting Present Value
1. Inflation	Consumer Price Index	5.71	$12,019
2. Inflation	Consumer Price Index (CPI)	5.71	
Productivity	Output per hour in the private business section	2.03	$15,469
3. Wages	Average weekly earnings in manufacturing (U.S.)	6.37	$13,017
4. Wages	Average weekly earnings in manufacturing (California)	5.86	$12,237
5. Wages	Average weekly earnings in manufacturing (Mississippi)	6.92	$13,934
6. Wages	Average weekly earnings in manufacturing, fabricated metals, and machinery (Jackson, MS)	8.13	$16,277
7. Wages	Average weekly earnings in manufacturing of plumbing and heating (except electrical) equipment (California)	5.14	$11,240

Sources: U.S. Department of Labor, Bureau of Labor Statistics, ***Employment and Earnings, States and Areas, 1939-78, Bulletin 1370-13*** (1979); ***Supplement to Employment and Earnings, States and Areas, Data for 1977-81***, Bulletin 1370-16 (December 1982); ***Monthly Labor Review*** (various issues) (Washington, D.C.: U.S. Government Printing Office).

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[1] *Culver v. Slater Boat Co. et al.*, 688 F.2d 280 (5th Cir. 1982).

[2] *Johnson v. Penrod Drilling Co.*, 510 F.2d 234 (5th Cir. 1975).

[3] *Jones & Laughlin Steel Corp. v. Pfeifer*, 76 L.Ed.2d 768 (U.S. S. Ct. 1983).

[4] Although there are differences in the treatment of some variables used in death as compared to injury cases, these differences are outside the scope of this article, and while much of the methodology that follows is applicable to injury situations, the focus of this analysis is on wrongful death cases.

[5] *Johnson v. Penrod Drilling Co.*, 510 F.2d 280 (5th Cir. 1975).

[6] Howard N. Fullerton, Jr. and James J. Burne, "Length of Working Life for Men and Women, 1970," *Monthly Labor Review*, Vol. 99, No. 2 (February 1976), pp. 31-35.

[7] *Beaulieu v. Elliot*, 434 P.2d 665 (Alaska 1967).

[8] In some cases, it may be possible to use a CPI which is specific to a certain location; however, location-specific CPI data are frequently not available.

[9] For the twenty-year period of 1961-1981, the inflation rate (as measured by the CPI) was compared to several rates of interest. For that period, the average annual increase in prices was 5.7 percent. Of the several series on interest rates observed, the lowest annual average was 6.2 percent for three-month Treasury securities, while the highest average was 7.9 percent for the prime rate.

[10] For a good treatment of real interest rates see G. J. Santoni and Courtenay C. Stone, "The Fed and the Real Rate of Interest," *Review of the Federal Reserve Bank of St. Louis*, Vol. 64, No. 10 (December 1982), pp. 8-18; also, see John H. Wood, "Interest Rates and Inflation: An Old and Unexplained Relationship," *Economic Review of the Federal Reserve Bank of Dallas* (January 1983), pp. 11-23. For the reader who wishes to go to the original source of much of the literature on real interest rates, see Irving Fisher, *The Theory of Interest* (New York: Macmillan Company, 1930), especially Chapter 19.

[11] The current (*ex ante*) real interest rate is the residual when the *expected* rate of inflation is subtracted from the nominal interest rate. However, the expected inflation rate must be estimated since it cannot be observed directly. Hence, measurement of the current real interest rate is subject to considerable uncertainty and is a source of controversy. The real interest rate used in estimation of wrongful death is an historical (*ex post*) statistic, and it is assumed, based on past behavior of the real rate, that a "normal" discount rate can be derived for use in estimating the economic loss due to wrongful death. For a discussion of the *ex ante/ex post* real interest rate dichotomy, see Santoni and Stone, "The Fed and the Real Rate of Interest"; Wood, "Interest Rates and Inflation: An Old and Unexplained Relationship"; and Fisher, *The Theory of Interest*.

[12] The $21,000 is obtained by multiplying the $1,000 of annual income by the remaining work life expectancy of 30 years. The resulting product, $30,000, must be reduced by 30.0 percent, which is the assumed level of the decedent's consumption.

[13] *Feldman v. Allegheny Airlines*, 524 F.2d 384 (2d Cir. 1975).

[14] The present value calculations in Table 3 all utilize a 10.0 percent discount rate. The previous assumptions regarding the decedent's age, work life expectancy, and consumption have been retained.

[15] We have introduced productivity since, in our opinion, the best way to include inflation is to use historical wage trends which involve a mixture of inflation, productivity, and other factors. Unless the wage trends are for the relevant age cohort, there would be a further need to estimate future wage changes due to merit and promotion. These factors can be accounted for by using age/earnings information and/or by introducing testimony specific to the decedent. For a discussion of some of these issues see Charles N. Dennis, William A. Sirmon, and Robert D. Drinkwater, "Wrongful Death Damages—Fair Compensation for Future Pecuniary Loss Requires Consideration of Economic Trends and Income Tax Consequences," *Mississippi Law Journal*, 47 (April 1976), pp. 173-209.

MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

MID-SOUTH ECONOMY

On both the national and regional levels, indicators of economic activity during third quarter 1983 showed a much brighter picture than during third quarter 1982. Real Gross National Product rose at an annual rate of 8.7 percent in the second quarter of 1983 versus a modest 0.9 percent increase during second quarter 1982. The leading indicators rose 13.5 percent for the first nine months of 1983, providing evidence of continued recovery. While retail sales showed little improvement during the early summer, the level of adjusted sales in July 1983 was 10.3 percent higher than a year ago. Excluding the automotive group, retail sales advanced 6.2 percent over July 1982 sales. Employment and production gains reflected businesses' efforts to restock after unexpectedly strong demand last spring. Unemployment from June 1983 to July 1983 registered the largest month-to-month drop in almost 25 years, with industrial production rising 1.8 percent over the same period. Since the recovery began in November 1982, industrial production has risen 9.7 percent, with new orders for durable goods increasing in seven of the last nine months. In the coming months, in response to increased orders and sales, manufacturers will begin to rebuild inventories. This replenishing of depleted stocks should provide continued upward momentum to the economy.

For the Mid-South region, total personal income grew 5.9 percent from first quarter 1982 to first quarter 1983, slightly outpacing the national increase of 5.6 percent. Sales tax collections remained strong for Alabama, Arkansas, and Tennessee. Total employment increased approximately 60,000 in July 1983 from June 1983 and some 150,000 over July 1982. The value of total construction activity was up across-the-board, with total number of dwelling units substantially above the comparable period last year.

Census data analyzed by the Bureau of Census showed the five-state Mid-South region experiencing an in-migration of 667,111 persons between 1975 and 1980. Out-migration from the Mid-South region totaled 454,239 persons, with 47.7 percent leaving for the twelve-state North Central region. Surprisingly, 53.0 percent of the in-migration back to the Mid-South region came from the same North Central region. The net effect of both in- and out-migration for the five-year period was an increase of 212,872 persons with 65.0 percent coming from the North Central region, 32.7 percent coming from the nine-state Northeast region, and only 2.3 percent coming from the thirteen-state West region.

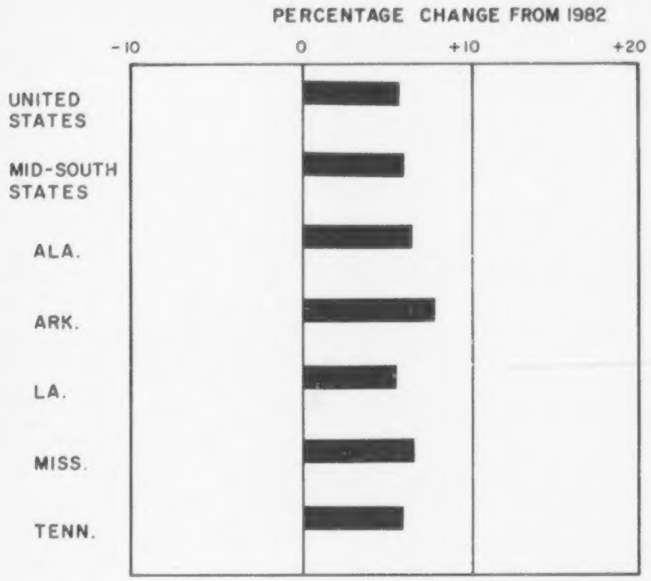
Finally, recent projections by the Census Bureau indicate that the population of the Mid-South region by the year 2000 is expected to grow 18.7 percent over the 1980 level, from 17,492,000 to 20,769,000.

Labor

Since the high rates of December 1982, the nation's jobless total has declined by approximately 1.4 million people, and the unemployment rate has dropped 1.3 percentage points to 9.5 percent for July 1983. During the same period, total employment increased by 2,192,000 persons. Productivity also showed an increase, with the index of output per hour in the non-farm sector rising 2.8 percent from second quarter 1982 to second quarter 1983. Three factors suggest more positive employment prospects in the future. First, the recovery is expected to increase employment at a rate of 2.5 percent over the next twelve months. Second, continued positive repercussions are expected from a more favorable tax policy; and third, moderate growth in the civilian labor force is expected.

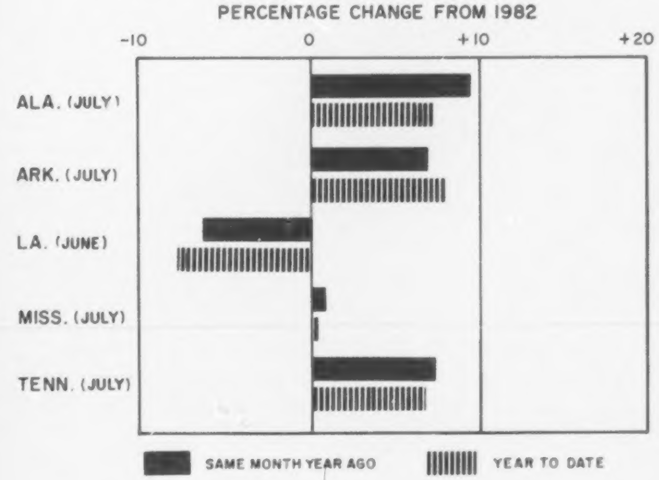
For the Mid-South region, the total number of persons unemployed increased to 932,200, only 0.1 percent above July 1982. The Mid-South civilian labor force declined 0.1 percent from last July, leaving the July 1983 aggregate unemployment rate of 11.8 percent at about the same level as a year ago. Mid-South non-farm employment declined by 81,300 jobs, or 1.3 percent, from a year ago. Manufacturing jobs declined by 16,500 persons from 1982, while non-manufacturing employment decreased by 64,800 persons, or 1.4 percent, below the July 1982 level. Arkansas registered a solid gain in non-farm employment since July 1982, primarily due to a 4.1 percent gain in manufacturing jobs. Louisiana experienced a 5.0 percent decline in manufacturing jobs from a year ago coupled with a slight drop in average weekly hours for production workers.

PERSONAL INCOME- I QTR. 1983

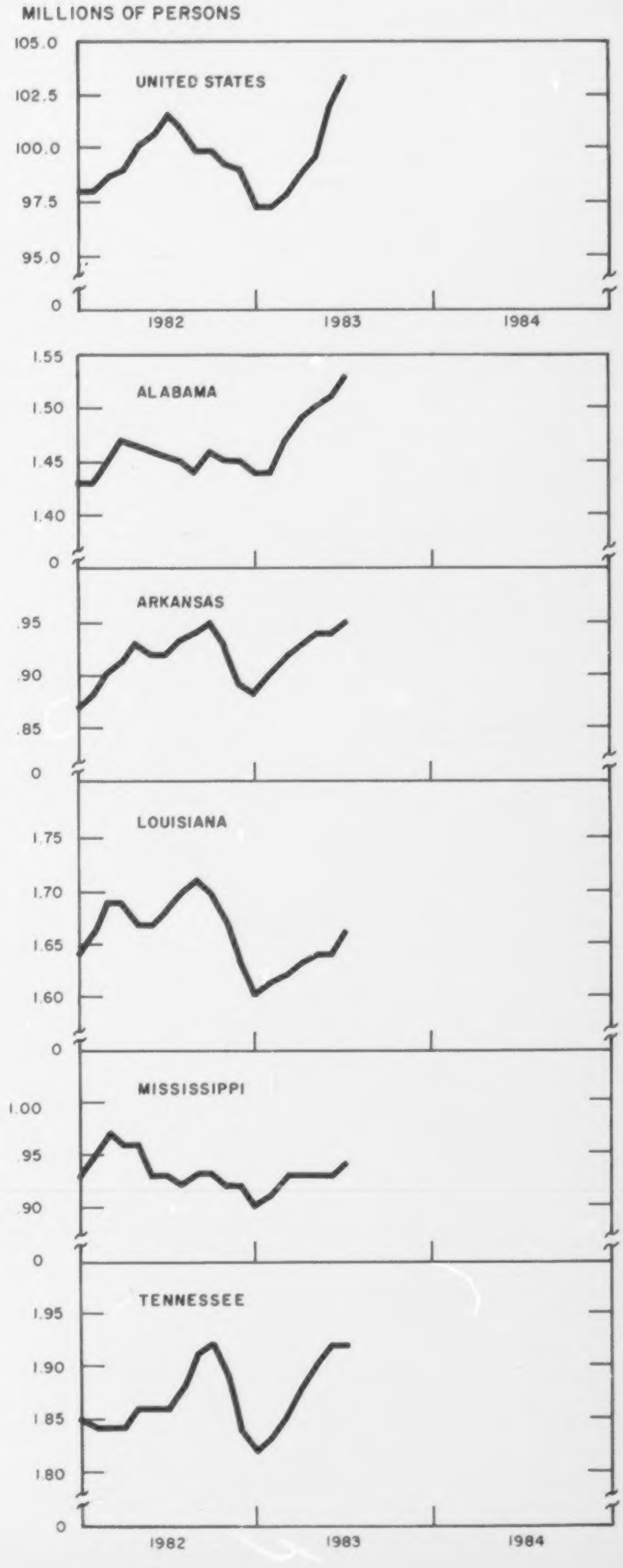


SOURCE: BUREAU ECONOMIC ANALYSIS

SALES TAX COLLECTIONS 1983



TOTAL EMPLOYMENT



Construction

For the twelve-month period ending June 1983, the dollar value of total building activity in the nation increased 18.6 percent compared to the same period in 1982. The dollar value of residential building activity led the way with a 57.3 percent increase, while non-residential activity declined 8.2 percent. Within the non-residential sector, industrial and office building construction fell 21.9 percent, school building dropped 4.0 percent, while hospital building increased 17.0 percent. However, new housing construction fell 0.6 percent in July 1983 from June 1983. A sharp increase in multi-family building offset an 11.9 percent drop in single-family units. This development has led many observers to speculate that the housing sector may be causing "a crack in the wall of recovery." With mortgage rates rising in both July and August, affordability has again become an obstacle to a sustainable recovery in the housing sector.

Most of the Mid-South states also experienced declines in office and industrial building, with hospitals and schools registering healthy gains. Louisiana and Tennessee were two Mid-South states that managed to register gains in non-residential construction activity.

Finance

Mortgage lending activity by Mid-South savings and loans experienced substantial gains over the levels a year ago, and net savings flow registered huge gains for the first half of 1983 versus the same period in 1982. According to the August 12, 1983, issue of the *American Banker*, the sixteen largest savings and loans in the Mid-South experienced a 33.8 percent increase in deposits for the year ending June 30, 1983, versus the same period in 1982.

Commercial banks in the Mid-South showed gains in total deposits of 16.1 percent from last July, outperforming the national increase of 11.2 percent. Growth in savings deposits across the Mid-South increased 155.6 percent from levels a year ago, again outperforming the nation.

LABOR 1983	United States (June)	Mid-South States				
		Alabama (July)	Arkansas (July)	Louisiana (July)	Mississippi (July)	Tennessee (July)
Civilian Labor Force	113,383,000	1,754,700	1,014,600	1,892,400	1,076,800	2,157,300
Percent Change Year Ago	+ 1.6	+ 1.0	- 0.8	+ 1.7	+ 0.8	+ 0.5
Unemployed	11,570,000	228,300	92,900	233,900	144,000	233,100
Percent Change Year Ago	+ 6.3	-14.3	- 2.6	+18.1	+17.4	-10.5
Unemployment Rate						
1983	10.2	13.0	9.2	12.4	13.4	10.8
1982	9.8	15.3	9.3	10.6	11.5	12.1
Non-Agricultural Wage & Salary Employees	89,760,000*	1,319,300	720,900	1,583,500	783,000	1,671,400
Percent Change Year Ago	N.C.	+ 0.2	+ 1.4	- 1.5	- 0.6	- 0.6
Manufacturing Employment	18,560,000*	326,900	204,200	192,600	202,900	467,000
Percent Change Year Ago	- 1.9	- 1.6	+ 4.1	- 5.0	- 0.5	- 0.7
Non-Manufacturing Employment	71,200,000*	992,400	516,700	1,390,900	580,100	1,204,400
Percent Change Year Ago	+ 0.5	+ 0.9	+ 0.4	- 1.0	- 0.7	- 1.1
Average Weekly Earnings of Production Workers in Manufacturing	$355.04	$310.43	$290.48	$402.52	$266.26	$306.12
Percent Change Year Ago	+ 6.3	+10.2	+10.9	+ 4.3	+ 9.3	+10.5
Average Weekly Hours of Production Workers in Manufacturing	40.3	40.9	40.4	40.7	39.8	40.6
Percent Change Year Ago	+ 2.5	+ 5.4	+ 3.3	- 0.2	+ 3.9	+ 4.4
Average Hourly Earnings of Production Workers in Manufacturing	$ 8.81	$ 7.59	$ 7.19	$ 9.89	$ 6.69	$ 7.54
Percent Change Year Ago	+ 3.6	+ 4.6	+ 7.3	+ 4.5	+ 5.2	+ 5.9

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1] JUNE 1983	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building						
Percent Change Year Ago	+18.6	+ 8.9	N.A.	+38.5	+18.6	+31.0
Residential Building						
Percent Change Year Ago	+57.3	+36.7	N.A.	+64.3	+66.7	+84.0
Non-Residential Building						
Percent Change Year Ago	- 8.2	- 7.5	N.A.	+23.1	-17.5	+ 2.1
Total Dwelling Units						
Percent Change Year Ago	+56.4	+34.8	N.A.	+67.8	+52.1	+65.6

[1] Twelve-month cumulative rate.

Source: Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

FINANCE JULY 1983	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of July 1983 Percent Change from July 1982							
Total Deposits	+ 11.2	+ 16.1	+ 10.5	+ 17.9	+ 10.6	+ 12.3	+ 11.8
Demand Deposits	+ 9.3	+ 7.1	+ 10.5	+ 3.4	- 1.1	+ 5.4	+ 4.5
Time Deposits	- 14.8	- 10.8	- 9.4	N.A.	- 5.3	- 11.2	- 11.7
Savings Deposits	+127.5	+155.6	+103.6	+ 22.0	+114.6	+229.2	+140.9

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY 1983	Alabama (July)	Arkansas (June)	Louisiana (June)	Mississippi (June)	Tennessee[1] (July)
Mortgage Loans Made (millions)	$ 73.8	$187.1	$180.8	$ 32.9	$ 65.1
Percent Change Year Ago	+240.1	+219.3	+104.3	+311.3	+173.4
Percent Change Year-to-Date	+251.3	+390.8	+126.1	+236.4	+160.9
Net Savings Flow (millions)[2]	$ 32.5	+ 65.4	$160.6	$ 26.1	$ 19.5
Percent Change Year Ago	+301.9	+ 74.8	+ 93.7	- 24.6	+ 32.9
Percent Change Year-to-Date	+305.1	+1,126.2	+242.7	+100.8	+403.3

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

Tennessee's economy continued to grow in the second quarter of 1983, primarily due to strong retail sales and construction activity. Retail sales rose 4.6 percent in the second quarter of 1983 versus second quarter 1982, with Memphis and Nashville registering gains of 8.3 and 7.6 percent, respectively. The dollar value of total building increased 31.0 percent for the twelve-month period ending June 1983 versus the corresponding twelve-month period in 1982. The dollar value of residential activity jumped 84.0 percent, with the number of dwelling units increasing 65.6 percent. Also, the Tennessee Department of Economic and Community Development reported $492.2 million in manufacturing investments during the first two quarters of 1983 compared to $309.1 million during the same period in 1982. In addition, non-manufacturing investments totaled $49.4 million, primarily in headquarters and distribution facilities. Tennessee's banks, savings and loans, and credit unions also experienced gains from last July, with savings deposits up 140.9, 142.0, and 23.0 percent, respectively. NOW accounts jumped 102.1 percent, share drafts increased 73.0 percent, and total deposits at commercial banks climbed 11.4 percent.

Problem areas for the Tennessee economy are in the employment and agriculture sectors. The mid-July index of prices received by Tennessee farmers for all farm products stood at 128.0 percent of the 1977 average, a decline of one index point from a year ago. The index for crops rose six index points, while the index for livestock dropped eight index points below the July 1982 level.

For Tennessee, the total number of persons unemployed dropped 10.5 percent from last July, causing the unadjusted employment rate to fall to 10.8 percent. Also, initial claims for unemployment benefits totaled 55,105 for July 1983 which was 33.9 percent below last July. However, while Tennessee's manufacturing employment in second quarter 1983 registered a modest gain of 0.8 percent from first quarter 1983, it was still 2.2 percent below second quarter 1982. Non-manufacturing employment was 1.9 percent below last year's second quarter figure. All the major metropolitan areas in the state remained well below their second quarter 1982 levels in manufacturing employment, with Chattanooga and the Tri-Cities the only two metropolitan areas registering gains from the second quarter of last year in non-manufacturing employment. Two positive signs emerging are the continued slower growth in the civilian labor force and the gains made in the number of weekly hours for production workers. Additionally, increases in hourly pay for production workers has generally outperformed the nation during the last three report periods.

Recent energy data released by the Energy Division of the Tennessee Department of Economic and Community Development indicated on a year-to-date basis that Tennessee coal production declined 15.5 percent, crude oil production increased 14.4 percent, and natural gas production increased 64.9 percent from the comparable 1982 period. In addition, consumption of gasoline for the first five months of 1983 declined 1.6 percent from the comparable period in 1982.

Finally, a recent analysis by the Bureau of Census indicated that from 1975 to 1980, 118,008 persons left Tennessee while 197,276 in-migrated. Of the net migration of 79,268 persons, 68.0 percent came from the North Central region, 30.0 percent came from the Northeast region, and 2.0 percent came from the West region.

THE EFFECT OF DISC ON SMALL EXPORTERS IN MANUFACTURING INDUSTRIES

*Clyde Posey and Joseph Szendi**

DISC (Domestic International Sales Corporation) legislation was enacted under the Revenue Act of 1971 as a tax incentive to stimulate exports by United States manufacturers.[1] DISC was designed to do the following:

1. Stimulate export sales of goods manufactured in the United states and improve the balance of payments deficit.
2. Offset the tax advantages enjoyed by American firms which manufactured goods abroad through foreign subsidiaries.
3. Offset the tax advantages provided by governments of foreign competitors to their domestic producers to stimulate their exports.[2]

It is necessary to mention that some foreign producers enjoyed certain advantages under the GATT Agreement (General Agreement on Trade and Tariffs). DISC legislation was designed to counteract some of them. Most European countries impose a value-added tax which is, in most cases, entirely refunded to an exporter. This has been permitted under GATT which restricts the types of export subsidies and import restrictions a country can invoke.[3] GATT was entered into for the purpose of reducing governmental barriers to international trade and has had the effect of limiting the way in which nations may legitimately subsidize their exports. Direct subsidies and rebates of direct taxes are prohibited; but indirect taxes, such as value-added tax, may be rebated if applied on a destination basis. The effect of this was to allow a nation imposing a value-added tax to give exporters a rebate of a substantial portion of the total tax that would otherwise have been imposed on their products.[4]

The effect of GATT was to place United States exporters in the position of having to bear the entire share of United States taxes, while foreign firms subject to value-added tax did not have the burden of one of their primary taxes. To avoid violating GATT restrictions, DISC was structured to provide tax deferral for exporters instead of a direct rebate on export goods.

The DISC Corporation

The requirements of a DISC are deceptively simple considering that DISC legislation is one of the longest and most complex of the international tax provisions.[5] Section 992(a)(1) of the Internal Revenue Code specifies the requirements as:

1. At least 95.0 percent of gross receipts must be derived from "qualified export receipts."
2. At least 95.0 percent of the adjustd basis of all assets of the corporation at the close of the taxable year must be invested in "qualified export assets."
3. The corporation must be incorporated in the United States and may have only one class of stock, and the par or stated value of the outstanding stock must be at least $2,500 on each day of the taxable year.
4. The corporation must make an election to be treated as a DISC, and such elections are in effect for the taxable year.

Of these requirements, only the qualified asset test provides problems. Qualified export assets consist of export property—property manufactured, produced, grown, or extracted in the United States by any person or persons other than a DISC—which is held primarily for the sale, lease, or rental in the ordinary course of trade or business for direct use, consumption, or disposition outside the United States, and not more than 50.0 percent of the fair maket value of which is attributable to articles imported into the United States.[6] These qualified export assets include any inventory of export propety itself, all related assets including working capital, and producers' loans, which are loans by a DISC either to its related manufacturer or to any other United States export manufacturer.

Taxation of DISC Income

The DISC corporation does not pay tax on its income. Instead, the shareholders are subject to taxation on the earnings and profits of the DISC. Shareholders are taxed 50.0 percent of the DISC's income from export sales regardless of whether the income is distributed to the shareholders or is retained by the DISC. The tax on the remaining 50.0 percent of the DISC's export income is deferred and is made virtually indefinite if the DISC complies with the statutory provisions for use of the funds it retains.

The method of allocation of income between a DISC and its parent is an important part of the DISC statute. Companies will find it advantageous to put as much of their income as possible into a DISC because of the long-term deferral for most of the DISC's profits. Profits of the DISC may be determined by three methods:

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1. Four percent of the qualified export receipts on the sale of such property by the DISC plus 10.0 percent of the export promotion expenses attributable to these sales.
2. Fifty percent of the combined taxable income of the DISC and its parent company on the sale of qualified export assets plus 10.0 percent of the export promotion expenses attributable to these sales.
3. The taxable income obtained from the sale price actually charged by the DISC subject to the rules provided in Section 482 of the IRC.[7]

Companies will generally find the first two methods most advantageous. In the case of low-profit margin goods, the 4.0 percent rule will be preferable if the pre-tax profit ratio to sales is less than 8.0 percent, while the 50.0 percent rule will favor high-profit margin goods with pre-tax profit to sales ratios greater than 8.0 percent.[8]

Evaluation of DISC

Since its enactment in 1971, a number of studies have been performed on DISC to determine its impact on increasing United States exports. The first report to Congress submitted by the Treasury Department for the tax year ending March 31, 1973, indicated 2,249 DISC tax returns were filed. This figure increased to over 12,200 DISC tax returns for the year ending March 31, 1980. This dramatic increase provides evidence that there are some benefits to firms using DISC. Other studies in later years confirmed some increase in exports but were inconclusive as to how much was attributable to the DISC program. The procedure used by the four major studies assumed that all tax savings from DISC were used to lower export prices; however, this asumption was not addressed specifically.[9]

A number of questions remain unanswered about the effectiveness of DISC in stimulating exports. Do its benefits pertain to large or small firms? Does DISC have an effect on lowering prices of exports? Is it used as a tax shelter? These are some of the questions which this article seeks to address.

Measuring Executive Opinions at Small Manufacturers in DISC Election

The objective of this article is to cast light on the effectiveness of DISC as a stimulus for increasing United States exports by small manufacturers. Since the term "small" is arbitrary and vague, for this study it was decided that firms with sales between $50 million and $100 million would be the focus. One hundred firms were selected from Standard and Poor's listing of corporations. Ten firms with annual sales in the dollar range stated above were selected from the following ten industry segments: electronic computing equipment, pharmaceutical preparations, machine tools, semiconductors, ball and roller bearings, measuring instruments, cement, oil field equipment, pumps and pump parts, and nitrogenous and phosphate fertilizers. Questionnaires were sent to these firms as though it was not known if they were involved in an export business. Of the 100 questionnaires sent out, 29.0 percent were returned; a number of these had comments supplied in addition to the answers to the questions posed.

Survey Findings

It was not known initially which firms had DISC, and the first question addressed this issue.

Table 1 provides the responses to the question, "Does your company or any of your subsidiaries currently operate under DISC tax status?"

Table 1
COMPANIES CURRENTLY OPERATING UNDER DISC STATUS

Response	Number of Responses	Percent of Total
Yes	32	62 %
No	20	38
Totals	52	100%

Of the 52 respondents, all provided an answer to this question, with 62.0 percent responding positively and 38.0 percent indicating they did not operate under DISC status.

The next four questions on the questionnaire concerned only those firms which responded "yes" to question number one.

Table 2 provides responses to the statement, "DISC has been a positive factor in increasing your firm's exports."

Table 2
DISC HAS BEEN A POSITIVE FACTOR IN INCREASING FIRMS' EXPORTS

Response	Number of Responses	Percent of Total
Strongly Agree	2	6 %
Agree	12	39
Indifferent	11	36
Disagree	5	16
Strongly Disgree	1	3
No Opinion	0	
Totals	31	100 %

Of the 32 firms which indicated use of DISC, 31 replied and 1 left the question blank. It is interesting to note that almost half the respondents indicated "indifferent" on the effect of DISC as a positive factor in increasing the firms' exports. However, 39.0 percent felt that DISC had been a positive factor, with only two firms strongly agreeing. Surprisingly, five firms (representing 16.0 percent) disagreed.

Two respondents using DISC who felt DISC did not help in increasing their exports commented on this question. A manufacturer of electrical automotive parts stated, "If the price of the product without considering the DISC is not profitable and competitive, the DISC is not going to help." The other commentary by a manufacturer of hydraulic pumps indicated, "Our philosophy does not seem to be influenced by DISC rules. We operate normally and then use the DISC to benefit what we've done." These comments indicate that some users did not feel DISC influences their export decisions. Rather, they use other criteria. Interestingly, both of these firms indicated use of DISC primarily as a tax shelter, suggesting that if a firm exports, DISC can provide some benefit to it.

Table 3 indicates the responses to the question, "Are the benefits of DISC greater for your firm than the costs?"

Table 3
DISC BENEFITS ARE GREATER THAN THE COSTS

Response	Number of Responses	Percent of Total
Strongly Agree	18	56 %
Agree	11	35
Indifferent	2	6
Disagree	1	3
Strongly Disgree	0	
No Opinion	0	
Totals	32	100 %

All 32 firms using DISC responded to this question. Fifty-six percent strongly agreed that the benefits outweigh the costs in the use of DISC. Another 35.0 percent agreed less strongly, and only two firms (representing 6.0 percent of the respondents) marked indifferent to this question. The opinions expressed in this question, with an overwhelming 91.0 percent seeing benefits to using DISC, may explain the increase in the number of DISC tax returns in 1980 having grown more than fivefold since 1973.

Most who agreed that the benefits outweigh the costs also stated that DISC could be improved to increase the benefits. Two electronics firms and two machine-food firms listed "simplification of compliance and calculation" as areas that should be changed to make DISC more beneficial, especially for smaller firms.

Table 4 addresses the question of what size firms benefit more from the use of DISC. Six of the firms did not respond to this question, while five marked more than one choice. Fifty-three percent felt that large multinationals obtained more benefits. This could be associated with the well-established markets and foreign operations many multinationals have through which they can rely on greater opportunities for export sales. Eighteen percent indicated more benefits from DISC accrue to medium-sized firms, while only 13.0 percent felt small firms reaped more benefits from DISC.

Table 4
SIZE OF FIRMS RECEIVING THE GREATER BENEFITS FROM THE USE OF DISC

Response	Number of Responses	Percent of Total
Large Multinationals	20	53 %
Medium-Sized Firms	7	18
Small Firms	5	13
No Response	6	16
Totals	38	100 %

The final question in this section of the questionnaire addressed the nature of the use of DISC by the responding firms. Of the 32 respondents, 3 marked both choices provided, resulting in more responses than questionnaires. Seventy-seven percent indicated they use DISC primarily as a tax shelter, while 23.0 percent of the respondents indicated use of DISC to increase competitiveness with foreign manufacturers. Of this latter group, three firms (representing 8.0 percent of the responses) also use DISC as a tax shelter, which increased the tax shelter use to 85.0 percent.

Table 5
USE OF DISC PRIMARILY FOR TAX SHELTER OR TO INCREASE COMPETITIVENESS WITH FOREIGN MANUFACTURERS

Response	Number of Responses	Percent of Total
Increase Competitiveness	8	23 %
As a Tax Shelter	27	77
Totals	35	100 %

Although the intent of DISC is to stimulate exports of Unites States goods, it would appear that most who can use DISC use it to shelter a portion of earnings from taxes.

The second part of the questionnaire dealt with firms who answered "no" to question number one, addressing the use of DISC.

Table 6 provides the responses to the question, "Is your firm aware of the benefits of DISC for small exporters?"

Table 6
AWARENESS OF DISC BENEFITS BY FIRMS NOT USING DISC

Response	Number of Responses	Percent of Total
Yes	15	75 %
No	5	25
Totals	20	100 %

Of the 20 firms who indicated they did not operate under DISC status, 75.0 percent stated they were aware of DISC, while 25.0 percent stated they were not aware of DISC benefits.

Table 7 addresses plans for the consideration of use of DISC by those firms surveyed who are not using DISC. A surprising 90.0 percent indicated they are not considering use of DISC in the future. Only two firms, representing 10.0 percent of the respondents, indicated consideration of future use of DISC.

Table 7
CONSIDERATION OF DISC FOR FUTURE USE BY FIRMS NOT PRESENTLY USING DISC

Response	Number of Responses	Percent of Total
Yes	2	10 %
No	18	90
Totals	20	100 %

Interpretations and Conclusions

Previous studies of DISC "assumed" that DISC provided an incentive for increasing export sales by giving United

States producers pricing benefits. However, prior studies indicated that prices were affected only minimally. Another point was that DISC was primarily a tax shelter for large multinationals. While export prices were not significantly affected by DISC, research provided no support for the position that DISC did not aid exports in other ways.

This study focused on small manufacturers in various industries and attempted to find out how extensively they use DISC and if, in fact, DISC has been a positive factor in increasing their exports. About one-half the firms responding in this survey felt DISC contributed to their exports. Also, the overwhelming majority indicated that benefits of using DISC are greater than costs. The firms in this category represented industry segments. Of eight of the ten industries used in the survey, only cement and fertilizer manufacturers did not respond positively to DISC.

The concept of DISC being more advantageous to multinationals is not dispelled by the responses addressing that area. More than half felt that multinationals benefited most, while less than one-fourth indicated medium-sized or small firms also benefited. It is interesting to note that one of the respondents commented on his firm using DISC to compete with foreign producers as an incentive to decrease price because of a strong dollar compared to other currencies.

Changes in DISC

Of the 32 firms who indicated use of DISC, only 4 did not provide comments on what changes would improve DISC. Numerous areas were identified, and the major ones will be presented.

Two firms in the electronics industry commented on the need for DISC with the current strong U.S. dollar in relation to other currencies. "In view of the current strong dollar, DISC is needed to help us meet pricing problems." This statement indicates that DISC can indirectly help increase competitiveness in the exchange rate differential.

Three firms representing oil field equipment, machine tools, and electronics suggested "elimination of the base period adjustment" as a change to help stimulate DISC sales.

Four firms commented on increasing tax benefits to improve DISC's ability to stimulate exports. Oil field equipment, pharmaceuticals, measuring instruments, and machine tool firms were represented in this group. "Permanent deferral of U.S. export profits" and "permanent deferral after some specified period of time—say ten years," are representative statements of respondents addressing that issue.

One further area was singled out as having a negative impact on DISC. A manufacturer of roller bearings and one of electronic computing equipment concerns suggested that Congress should support DISC. One respondent stated, "Less congressional noise would help in providing assurance that DISC will not be suddenly eliminated." To reinforce this statement the respondent producing bearings included a nine-page proposal to replace DISC issued by the Office of the U.S. Trade Representative. One oil field equipment respondent adequately summarized this point with the following statement, "In recent years, there's been a lot of talk and legislation on eliminating DISC from Congress since it's only a tax shelter and from the administration in response to GATT. This makes it very hard to invest a lot of time or money in a DISC since it may be legislated out of existence." Changes in these and other areas would have a positive impact on DISC.

Drawbacks to DISC

Drawbacks to DISC is another area where numerous opinions were expressed. These comments tended to be in the same vein as the previous comments in that these drawbacks are specific problem areas pointed out by various firms. There is an unstated implication that if these areas were changed, the impact would be beneficial to domestic exporters.

Eighteen of the "yes" questionnaires had substantive comments on this subject, with the most popular being bookkeeping requirements and paperwork. Eight questionnaires specifically identified this point as the single drawback in the use of DISC.

The next most popular issue suggested as being a drawback to DISC concerned qualified receipts and assets. One firm in the oil field equipment industry responded that "certain restrictions on a DISC's assets are a major drawback," while another firm in the same industry stated: "It is difficult to invest the profit in foreign assets." This firm implied that it tries to reinvest the DISC profit but has problems meeting the requirements for "foreign" assets.

Three respondents provided very detailed comments on the drawbacks of DISC which are especially worthwhile. One commented on the incremental ruling of DISC having a negative effect, and two commented on the IRS' position on DISC. A technology firm stated: "Incremental ruling has virtually erased our benefit. Last year, because of it, our commission was $253K; our dividend was $17OK. Tax savings for the year were only $38K." The point on the drawback of the incremental ruling is well shown by this respondent.

The IRS has a detrimental effect on DISC commented an electronic components manufacturer who stated: "Complexity of rules makes audit (IRS) adjustment a *certainty*, therefore, will probably impact effective tax rate in year of audit."

The final comments, and possibly the strongest, exposing disadvantages of DISC use came from a manufacturer of pipeline equipment. This respondent stated: "The main drawback is an IRS audit by personnel who are said to be specialists. Most of them, although not all, have hallucinations of abuse of the system. This type of audit is extremely costly to both the government and the taxpayer."

In terms of overall importance, it seems that DISC is considered as a stimulus for exports by small United States manufacturers, although not necessarily affecting prices materially. The fact that a substantial portion use DISC and comment favorably on its benefits indicates that the DISC program is achieveing the goal of improving competitiveness of United States exports, but the strong negative comments about its disadvantages indicate that DISC legislation should be amended with the aim of making it a more simplified and profitable tax vehicle for U.S. manufacturers in order to stimulate U.S exports, thereby achieving the original objectives of DISC.

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[1] Samuel Rabino, "An Attitudinal Evaluation of An Export Incentive Program: The Case of DISC," *Columbia Journal of World Business* (Spring 1980), p. 61.

[2] *Ibid.*

[3] Emory S. Naylor, Jr., and Richard A. Hanson, "Some Observations Concerning the Operation of a DISC," *Taxes—The Tax Magazine* (December 1972), p. 783.

[4] *Ibid.*

[5] Robert Feinschreiber, "DISC: A New Export Tax Incentive," *Financial Executive* (April 1972), p. 66.

[6] Internal Revenue Code of 1954, Section 993(c)(1).

[7] Internal Revenue Code of 1954, Section 994(a).

[8] Rabino, "An Attitudinal Evaluation of An Export Incentive Program," p. 63.

REFERENCES

1. Bevans, Charles I. *Treaties and Other International Agreements of the United States of America 1876 to 1949* (7 Volumes). Washington: Government Printing Office, 1970.
2. Dent, Frederick B. *Columbia Journal of World Business*, Fall 1973, 8, pp. 26-29.
3. Eberle, William D. "Negotiating A New World Marketplace—An Overview," *Columbia Journal of World Business*, Fall 1973, 8, pp. 30-33.
4. Feinschreiber, Robert. "DISC: A New Export Tax Incentive," *Financial Executive*, April 1972, pp. 66-70.
5. Hearing Before the Committee on Small Business. *Tax Incentives and Small Business Exports*. Washington: Government Printing Office, 1982.
6. *Internal Revenue Code of 1954*. Washington: Government Printing Office, 1982.
7. Naylor, Emory S., Jr., and Richard A. Hanson. "Some Observations Concerning the Operations of a DISC," *Taxes—The Tax Magazine*, December 1972, pp. 783-792.
8. Price Waterhouse. *Economic Impacts of the Domestic International Sales Corporations Tax Provisions*. Washington: Price Waterhouse, 1982.
9. Rabino, Samuel. "An Attitudinal Evaluation of An Export Incentive Program: The Case of DISC," *Columbia Journal of World Business*, Spring 1980, 15, pp. 61-65.
10. Tinnin, David B. "Trying to Restart the Engine," *Fortune*, November 29, 1982, pp. 52-55.

AN ASSESSMENT OF THE ROLE OF THE SPONSOR-PROTÉGÉ COALITION AS A VEHICLE FOR UPWARD MOBILITY

*Tilton L. Willcox**

INTRODUCTION

Personal assistance in executive upward mobility can come from a number of sources acting in a guiding or advisory capacity—peers, supervisors, guides, protectors, benefactors, sponsors, advocates, and mentors. Shapiro, Haseltine, and Rowe,[1] in their article, "Moving Up: Role Models, Mentors, and the 'Patron System,' " suggest that there is a continuum of those who function in advisory/support roles as they facilitate entry and mobility for their protégés. At one end of the continuum there is the relationship between peers helping each other to succeed and prosper. The term "peer pals" has been coined to describe this relationship. At the other end of the continuum is the relationship between high-level mentors and their protégés. At the two-thirds point on the continuum there are the sponsors who serve more as strong but less powerful patrons than mentors in providing the visibility, access to information, and coaching needed to keep their protégés upwardly mobile. At the one-third point on the continuum are the "guides" whose primary function is to point out the perils and shortcuts.

The purpose of this article is to examine the relationship at the two-thirds point that can exist between sponsors and protégés who have formed "coalitions" or "push-pull" teams to enhance their individual climb up the organizational hierarchy. The coalitions, which will be called sponsor-protégé coalitions, can be defined as longstanding combinations of an upwardly mobile boss (sponsor) and a certain subordinate (protégé), who have resolved or suppressed any personal differences and now function as a mutually-supporting, close-knit team in the competition for promotion. The alliance tends to move laterally or upward in the organization as a single entity for the duration of the personal coalition.

The relationship between the boss and certain subordinates in the sponsor-protégé coalition tends to be one of mutual benefit. The protégé may complement his superior by being strong in an area where his superior is weak. He may serve in the role of technical advisor, confidant, detail man, etc. Those in the coalition compete for promotion as a team, with the subordinate helping to push the boss up in the organizational structure. When the sponsor rises, the protégé moves with him and, in essence, is pulled up in the hierarchy. Such coalitions or alliances or push-pull teams can be very efficient; however, like high-level mentorship, they may also foster organizational conflicts and executive anxiety.

James Clawsen[2] summarized his study of this type of developmental superior-subordinate relationship by stating that the essential characteristics of the relationships are: a high degree of role complementarity; a high level of mutual respect and trust, developed by consistency in behavior; an informal relationship; openness with information; and a high level of interaction frequency.

The following real-life example illustrates how one sponsor-protégé coalition climbed rapidly in the military hierarchy. First Lieutenant X (navigator) joined the SAC B-36 commanded by Captain Y (pilot) in the early 1950s. Lt. X was an outstanding navigator and mission planner; Captain Y was a good pilot and an excellent organizational politician. Their performance in the air and at the officers' club bar earned them an early promotion to the next respective ranks. When Captain X and Major Y were assigned to a new B-47 bomber wing, they managed to stay together as the nucleus of a three-man B-47 crew while most crews were being formed by pilots, navigators, and co-pilots who had not flown together before. While other crews were still learning to work together, they passed the rigorous evaluation for combat ready status and were the first crew in the wing to obtain Select Crew status and spot promotions to the next respective ranks. Major X and Lt. Colonel Y were selected as the wing's chief standardization crew, and their spot promotions were soon made permanent below the zone promotions. Major X's superior navigational ability kept the crew visible, and Lt. Colonel Y's political acumen helped the crew obtain the maximum career mileage from their good performance in the air. Lt. Colonel Y had received a constant superior performance evaluation report for his crew's performance, and he, in turn, gave his navigator a steady stream of superior ratings. Major X was the first man in his West Point class to become a major.

The sponsor-protégé coalition of Major X and Lt. Colonel Y continued for another seven years as they progressed together up the Strategic Air Command's hierarchy as squadron commander and squadron navigator, as wing director of operations and wing training officer, as wing commander and chief of bombing and navigation, and as division commander (brigadier general) and base

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commander (colonel), respectively. Officer X was instrumental in providing the planning and ideas that helped push Officer Y to brigadier general. Offier Y's steady stream of superior performance evaluations for his protégé and his ability to offer more and more responsible jobs to his "navigator" enabled Officer X to reach the rank of full colonel far ahead of most of his military academy classmates who had been required to establish workable superior-subordinate relationships with many bosses as they advanced. Other examples of the use of sponsor-subordinate coalitions for upward mobility might include John F. Kennedy and Robert F. Kennedy, Robert S. McNamara and his "whiz kids," and General Douglas MacArthur and his protégé planner in Washington and the Phillipines—Lt. Colonel Dwight D. Eisenhower.

In recent years there have been numerous studies of the mentor-protégé relationship. Roche[3] and Willcox[4] documented the importance of this relationship by surveying the importance placed on the mentoring process by high-level executives. Farris and Ragan investigated the mentor-protégé connection and its impact on female executives.[5] Mentorship is an important and prevalent phenomenon in large American organizations. The mentor-protégé relationship can contribute significantly to management development programs. A few great mentors or "godfathers" in each field develop the top contributors for the next generation, passing on the lamp of learning as the short edge of professional competence.[6] On the other hand, mentorship which ignores merit can be very demotivating for those not blessed with a high-level mentor.

A search of the literature indicates that little has been written about the sponsor-protégé relationship. A library computer search showed no current articles on the general subject of sponsor-protégé coalitions or alliances. The purposes of the study being reported in this article were (1) to determine the prevalence of sponsor-protégé coalitions or push-pull teams in American organizations, (2) to examine the advantages and special problems of the coalitions, (3) to identify the barriers to their existence, (4) to evaluate the importance high-level executives have placed on their (past) membership in such coalitions, and (5) to ascertain the attitude top American executives had toward sponsor-protégé coalitions.

THE SAMPLE AND METHODOLOGY

The sample tested was obtained from a mail survey sent to 800 corporate presidents and vice presidents, general officers in the Armed Forces, and federal government executives at the GS-16 or higher level. The mailing list for business executives was selected randomly from *Standard and Poor's Register of Corporations, Directors, and Executives*. The general criterion for business executives was that they occupy a very senior position in corporations with over 1,000 employees. Preference was given to executives in very large organizations or in organizations that offered a higher degree of mobility due to the existence of affiliated organizations. The mailing list for federal executives was made randomly from the *Congressional Directory*, the *United States Government Manual*, and a list of women in the federal government, GS-16 and above, prepared by Sarah Weddington, Special Assistant to President Carter, April 2, 1979. The addresses of the general officers queried were obtained from the senior staff changes section in the military trade or professional journals. Fully completed questionnaires were returned by 225 business executives, 10 general officers, and 17 federal executives. Thirty-seven of the returned questionnaires were from women executives. Forty percent of the responses were from firms with over 10,000 employees. The sensitive nature of the questionnaire dictated that answers be given anonymously.

Data for this study were collected using a two-page questionnaire. Respondents' perceptions regarding sponsor-protégé coalitions were measured on a five-point Likert scale—agree strongly; agree somewhat; neither agree nor disagree; disagree somewhat; disagree strongly.

FINDINGS

Prevalence of Sponsor-Protégé Coalitions

The extent to which sponsor-protégé coalitions or "push-pull" teams exist in organizations is difficult to measure or recognize because of the subtle nature of many of the alliances. Sponsor-protégé coalitions may be confused with efficient work teams, moving through the hierarchy together, in which there is only a limited effort to sponsor the careers of the subordinates. Also, the subordinates are not consciously engaged in attempting to push their superior upwards in the organization. Sponsor-protégé coalitions may be very subtle and not aggressively worked or recognized.

Respondents made the following comments about the existence of coalitions: "In most large organizations such alliances must be suspected, if not acknowledged." "These coalitions are not necessarily made up of a senior man who is only one step ahead of the junior man." "The sponsor-protégé relationship is sometimes unconscious—the people one knows can perform are favored over the ones unknown and replace the incompetents. The sponsor and protégé are not always aware of their relationship."

Thirty-one percent of the respondents either agreed strongly or agreed somewhat that sponsor-protégé coalitions are prevalent in the organizations that employ them. Slightly more than half the respondents stated that the coalitions were not prevalent in their organizations. It is suspected that a higher percentage of respondents would have acknowledged the presence of the coalitions in their organizations if the term "coalitions exist" had been used instead of "coalitions are prevalent." The fact that they do exist to a rather high degree in nearly one-third of the organizations in the sample indicates that it is a phenomenon or concept of considerable importance.

Advantages of Sponsor-Protégé Coalitions

There is little to question in the statement that the protégés in the sponsor-protégé alliance enjoy special advantages in their competition for promotion that their peers do not have, such as increased organizational visibility, access to information, a personal guidance counselor, help in passing through the "filter points" at which disproportionate numbers are screened out of progressively higher managerial levels, and preferential treatment in assignments. "Allying yourself with your immediate superior not only wins the executive's confidence, but also allows you to expand your role within the organization."[7] Only 27.0 percent of the respondents disagreed that their coalition memberships had not facilitated their careers.

The sponsor-protégé relationship can be a two-way street, with the protégés being instrumental in the sponsor's promotion(s), especially if the relationship continues to exist because the members are highly complementary to one another—the brilliant trial lawyer who owes much of his success to the expertise of his research assistants, or the successful, dynamic general who would be severely handicapped without his able planners or G-2s. Juliette Moran, a top executive at GAF, emphasized the importance of the boss pulling good subordinates up when she made the following statement about Jess Werner, chairman of the board of GAF: "Dr. Werner is a very bright man who took several people along as he moved up the ladder. . . . He took us along because we were useful!"[8]

When sponsor-protégé coalitions move up they should be more efficient initially because members are used to working with one another. Do they continue to have an advantage over or outperform boss-subordinate teams where the sponsor-protégé relationship does not exist? The executives surveyed were asked to indicate the intensity of their agreement or disagreement with the following statement: "Sponsor-protégé coalitions tend to outperform boss-subordinate combinations where the sponsor-protégé relationship does not exist." By a margin of nearly two to one the executives queried disagreed with the statement.

While the average consensus is that they do not outperform non-sponsor-protégé work teams, a significant proportion of the executives surveyed (27%) felt that they do. There were no comments made by respondents indicating that the performance of coalitions suffered extensively because of the sponsor-protégé relationship.

Special Problems of Sponsor-Protégé Coalitions

The existence of sponsor-protégé coalitions can present some problems for their organization and for the individual members. There is a danger of inbreeding as executives move up together, especially when the sponsor has chosen protégés primarily because they have his set of values and his orientation. The opportunity cost of coalitions which preclude the formation of new boss-subordinate combinations that might prove more synergistic or more adaptive to new environments or new tasks could be high. There can be the advantage of not becoming overly dependent. Even the best sponsors must usually be abandoned if the protégé is to reach full maturity. The sponsor may not be capable of advancing as fast as his protégés, and the protégés might be reluctant or unable to vacate their coalition.

Respondents made the following comments about the negative aspects of sponsor-protégé coalitions. "The arrangements can be detrimental when cliques are formed and other non-championed, highly-capable personnel are excluded and/or deterred from deserved promotions." "They are destructive if based on bias, friendship, sexual attraction, family/political ties, etc., rather than skills to do the job." "If sponsor-protégé relationships exist in an organization of professionals, then when failure occurs, the entire team sometimes must be replaced." Farris and Ragan cited the hazards or dangers of the mentor-protégé relationship in the following quote:

> Although there are obvious advantages and benefits to the mentor-protégé relationship, any affiliation that involves a type of emotional closeness also leaves room for dependencies, disagreements, animosity, and a parting of the ways. The mentor-protégé relationship is no exception.[9]

Respondents were asked to evaluate three possible problems resulting from the existence of coalitions—resentment by non-members, the loss of highly qualified executives who did not have a sponsor, and the negation of formal effectiveness reporting systems. Only 10.0 percent indicated that non-members of sponsor-protégé coalitions do not resent members of such coalitions. Sixty-five percent agreed strongly or agreed somewhat that there was resentment. The remainder were neutral in their observations. When asked if the competitive disadvantage of competing individually against sponsor-protégé coalition members had resulted in their organizations' loss of some highly qualified executives, respondents' replies did not indicate that this was a major problem. Only 7.7 percent strongly agreed that it was a problem; another 14.3 percent agreed somewhat that it was a matter for concern in their organizations. Fifty-seven percent (57%) disagreed that it was a problem; twenty-two percent (22%) were neutral in their answers.

In the example given earlier about Air Force officers X and Y, the ultimate reason for the navigator's rapid rise to the rank of full colonel was the unbroken stream of superior performance reports he had received from his sponsor. Where selection for promotion is by remote boards using performance reports, inflated performance evaluations can complicate or invalidate the selection process. Respondents were asked how often they had observed that longstanding sponsor-protégé coalitions tend to negate formal merit promotion systems as sponsors give inflated effectiveness reports to protégés. Over 60.0 percent indicated they had frequently or occasionally made this observation. Apparently, inflation of performance/effectiveness reports by sponsors is a subject for some concern in many organizations.

Organizational Barriers to Sponsor-Protegé Coalitions

Possibly the most formidable barrier to the creation of sponsor-protegé coalitions is the negative viewpoint some top executives have about the coalition. For example, one executive commented: "Sponsor-protegé coalitions are havens for weak, corrupt, exploitative people who are not sufficiently self-reliant and altruistic to be entrusted with responsibility for important matters." A number of the respondents commented that they would not tolerate the formation of coalitions in their organizations. "Business is tough, and there is no room for personnel practices not based on ability."

A main barrier, intentional or unintentional, to the continued existence of longstanding upwardly mobile coalitions or push-pull teams is the difficulty sponsors have in taking their protegés with them when they move. Only one-fourth of the executives surveyed took one or more protegés with them the last time they switched companies or agencies. Respondents were asked to agree or disagree with the following comment: "It is easy to modify your organization's structure and staffing to accommodate an incoming or rising executive's desire to bring his protegé with him at the middle management level; at the top management level." There was general disagreement at both levels that it was easy for executives to bring along their protegés. Only 7.4 percent agreed that it was easy at the top management level, while only 2.8 percent thought it easy at the middle management level. One major general respondent wrote: "Sponsorship is not as long lived as it was in earlier times of my military service because sponsors can no longer move people with them when they move nearly as easily as in the past. Moreover, promotion by board members is perceptive and counters efforts to sponsor undeserving people." Promotion by board action mentioned above and central assignments are two additional barriers to the misuse of sponsor-protegé coalitions. Promotion boards appear to be able to cope with inflated effectiveness reports to some degree. When 92.0 percent of the officers in the Air Force received "nines," the loftiest rating at the time in 1974, other parts of the effectiveness report such as narrative comments of evaluating and reviewing officers and the duty description, which portrays scope and level of responsibility, influenced an assessment of overall quality and potential vis-a-vis the numerical ratings.[10] When all bosses are inflating subordinate effectiveness reports, the advantage of having a sponsor diminishes.

An Executive Assessment of Their Membership in Sponsor-Protegé Coalitions

The corporate presidents, vice presidents, officers, and federal executives surveyed were asked if they had ever considered themselves to be a member of a sponsor-protegé coalition. Forty-six percent stated that they had been members at one time or another in the following roles: sponsor only (3%), protegé only (15%), both as a sponsor and as a protegé (28%).

Respondents who indicated that they had been members of coalitions were asked if their membership had facilitated their ultimate promotion to their current position. A slight majority agreed strongly (21.7%) or agreed somewhat (29.6%) that membership had facilitated their promotions. Only twenty-seven percent (27%) disagreed that membership in sponsor-protegé coalitions had aided their careers.

The Existing Attitude of Top Executives Towards Sponsor-Protegé Coalitions

One of the purposes of this study was to make an assessment of the attitudes of top executives towards sponsor-protegé coalitions. The following question was used to make this assessment: "Weighing the advantages of sponsor-protegé coalitions (existing, compatible, proven teams) against the possible disadvantages (internal politics, favoritism, orphaned protegés), would you encourage the formation of such coalitions among the executives under your supervision?" From their evaluations it was apparent that few top executives favored the formation of coalitions. The tabulated results were: strongly agree with the statement (favor coalitions) (2.8%); agree somewhat (11.5%) versus disagree somewhat (20.8%); and disagree strongy (40.7%). On the Likert scale the score on this question would definitely be towards not favoring the formation of the coalitions. Comments ranged from "The disadvantage of the sponsor-protegé combinations completely outweigh any possible advantages," to "I see sponsor-protegé coalitions as often honest *skill balancing* teams and when this is true and both are open, then most of the negatives die away."

CONCLUSIONS

The coalitions of a supervisor (sponsor) and certain subordinates (protegés) who have formed alliances to enhance their mutual advancements is not a rare phenomenon in American organizations. The subtle nature of the coalitions tends to hide or veil their importance as a management development tool and mechanism for enhancing advancement possibilities. While coalitions are not admittedly prevalent in the majority of American organizations, they are numerous enough to warrant examination.

Apparently there are more advantages in coalitions for the members than for their organizations. On the other hand, when coalitions are a medium for honest skill balancing, they can increase organizational effectiveness. The sponsor-protegé relationship that exists in the coalitions can be a helpful management development vehicle for the upwardly mobile, capable protegé. When the protegés are truly competent, their membership in a coalition can prevent their becoming lost in large organizations. Conversely, the existence of coalitions can be demotivating for the non-sponsored and foster inbreeding and favoritism. Coalitions have resulted to some degree in the loss of highly-qualified, non-sponsored executives, but most top managers do not feel this is a major problem. A more serious problem of coalitions is their effect on formal merit promotion systems where inflated performance reports can be a problem.

Intentional or unintentional barriers can inhibit the long life of coalitions as team members move up the hierarchy. If top management thought the advantages of longstanding coalitions outweighed the disadvantages and these senior executives desired the formation of the alliances, then the main barrier to their longevity—the inability to take along a protégé—would disappear. Apparently this barrier remains intact in most companies at both the top and middle levels of management. Centrally-made assignments and selection for promotion by remote boards whose members may not know the protégé can reduce to some extent some of the advantages the sponsored might have over the non-sponsored.

Nearly half the executives in the sample had been coalition members at one time or another, and more than half the respondents who had been members stated that this membership had furthered their careers. The fact that coalition membership had helped their career obviously had not influenced their attitude towards such alliances since less than 15.0 percent would encourage the formation of sponsor-protégé coalitions in their organizations. Despite its disfavor, the subtle sponsor-protégé coalitions will continue to offer promotional leverage to members. Junior managers and students of management and organizational politics should be aware of the coalition's role as a career advancement vehicle.

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[1] Eileen C. Shapiro, Florence D. Haseltine, and Mary P. Rowe, "Moving Up: Role Models, Mentors, and the 'Patron System,' " *Sloan Management Review*, Spring 1978, pp. 51-58.

[2] James G. Clawsen, "Mentoring in Managerial Careers," a working paper (Graduate School of Business Administration, Harvard University, undated [circa 1980]).

[3] Gerald R. Roche, "Much Ado About Mentors," *Harvard Business Review*, January-February 1979, pp. 14-28.

[4] Tilton L. Willcox, "A Self Assessment of the Mentoring Process," *What Can Management Do to Improve Productivity in the 1980 Decade?*, Mississippi State Southern Management Association, 1980, pp. 58-60.

[5] Roy Farris and Linda Ragan, "Importance of the Mentor-Protégé Relationships to the Upward Mobility of the Female Executive," *Mid-South Business Journal*, Vol. I, Number 4, October 1981, pp. 24-28.

[6] George T. Harris, "Godfathers and Gossips," *Industry Week*, October 27, 1980, pp. 32, 36-37.

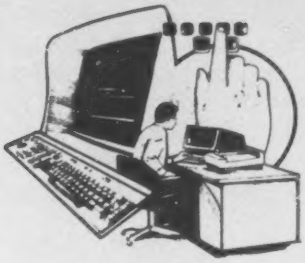
[7] Andrew S. Edson, "Mentors: Do They Work in PR?" *Public Relations Journal*, July 1980, pp. 18-19.

[8] Ruth Halcomb, "Mentors and the Successful Women," *Across the Board*, February 1980, pp. 13-18.

[9] Farris and Ragan, p. 27.

[10] Edward Gates, "How Best To Curb OER Inflation," *Air Force Magazine*, April 1981, p. 95.

THE COMPUTER CENTER



by Peter L. McMickle, Ph.D., C.P.A.

COMPUTERIZED ACCOUNTING SYSTEMS: ARE WE LOSING CONTROL

With the price of computer hardware and software falling rapidly, it seems as if almost every business now wants or has a computerized accounting system. The advantages of these systems are well known. The disadvantages are not so widely publicized.

Anyone who has been involved in the actual installation of a computerized accounting system will agree that improvements may not be easily or immediately achieved. The new system may have hardware or software bugs that need to be ironed out over time. People have to be trained in the operation of the system. Frequently, there is a reorganization and shifting of jobs. Some personnel may be released, or the work force may be reduced by attrition. The costs of equipment and software upkeep are often much greater than was planned. In a few circumstances, the computerized system may be slower and require more personnel than the old manual system; but, even in these instances, the new system will usually allow for much greater growth potential. Ultimately, most of these problems are resolved and the system performs pretty much as it was expected to.

What was not expected is the inflexibility of the new system and the serious control problems which have been created by its introduction into the business. Inflexibility can be cured by more creative programming. The control problem is more fundamental and, as a result, much more difficult to solve.

Inflexibility

The small- to medium-sized business usually buys off-the-shelf, proprietary software produced by a software house. Currently, the majority of such accounting software programs have fixed formats for inputs, file structures, and reports. Often there is a poor interface between what the program provides and what the business is use to using.

Even after the firm has adjusted for changes in the way data are inputed and recorded, there is a continuing problem with the reports. They may not be what management needs or wants. The solution is expensive. A programmer unfamiliar with the program and without adequate documentation can be hired to modify the software. In a dynamic business environment this can lead to a permanent position for an in-house programmer who continuously modifies and upgrades the software.

Much of this inflexibility can be avoided to begin with by better designed programs. Some software companies have become aware of the problem and are correcting it. Software can now be purchased that allows the user to *customize formats* without reprogramming. Businesses should insist upon this feature in the software they purchase.

Contol Weaknesses

The most serious problem with today's computerized accounting systems in comparison to traditional manual systems is not inflexibility, but control. Some firms have learned the hard way how much easier it is for fraud to be perpetrated in the typical computerized environment and how much more difficult it is to detect.

This control problem is inherent in the way in which today's computerized accounting systems have been designed. It should be remembered that most of these systems have been developed by programmers who are not accountants. Although these individuals are intelligent, they are usually unfamiliar with the fundamentals of double-entry accounting, even with debits and credits. In a recent issue of *PC Magazine* [Feb. 1983, p. 136], a review of eight general ledger programs criticized all of the products for problems that reflected a lack of familiarity with accounting on the part of the developers. The most significant result of this unfamiliarity with accounting has been the destruction of the basic control structure found in traditional double-entry accounting systems.

In a well-structured accounting system, each sub-system independently communicates (sends a journal voucher or batch control total) with the General Ledger Department where the information is compared and reconciled before entry into the Control Accounts. Consider, for example, the purchase of $1,000 in merchandise. The following communications to the General Ledger would take place:

	Journal Vouchers or Batch Control Totals to General Ledger		
Sub-System Sending	Account	DB/CR	Amount
1. Purchasing	Purchases	DB	$1,000
2. Accounts Payable	A/P	CR	1,000
3. Inventory	Inventory	Db	1,000
	Purchases	CR	1,000
4. Cash Disbursements	Cash	CR	1,000
5. Accounts Payable	A/P	DB	1,000

This separation of duties and independent communication to the General Ledger is an historic cornerstone of good accounting control. In the example, the payout of $1,000 by Cash Disbursements must independently correspond to what Purchasing says was purchased, what Inventory says it received, and what Accounts Payable authorized and later reviewed.

Contrast this historic approach with the typical configuration of today's "integrated," computerized accounting systems. TCS Software (Houston, Texas) and Peach Tree Software (Division of MSA, Atlanta, Georgia) are two of the bigger firms for micro-computer software. They both divide their accounting systems into five semi-integrated modules:

1. Accounts Payable
2. Accounts Receivable
3. Inventory
4. Payroll
5. General Ledger

A purchase of $1,000 in merchandise would be recorded as follows:

	Subsidiary Accounts		
Module Updates	Account	DB/CR	Amount
1. Accounts payable only	A/P	CR	$1,000
	Purchases	DB	$1,000
	A/P	DB	$1,000
	Cash	CR	$1,000

Net Balances are available on file for direct updating of the General Ledger. Inventory is independently maintained and does not integrate into the regular system.

All entries for the purchase are controlled by the operator in charge of accounts payable. This is an advertised virtue that is, in fact, a handicap. One party controls the recording of the purchase, the opening and closing of accounts payable, and the disbursement of cash. The amounts that interface with the General Ledger should always balance because they all come from the same source.

The General Ledger no longer performs its traditional role of the "Grand Controller" of the accounting system. The traditional control structure of separation of duties coupled with independent regulation has been destroyed.

A clever operator can now process improper invoices for fictitious purchases, and the system will no longer automatically detect the irregularity. Receivables can go unrecorded for friends of the operator and still balance with control totals for sales.

These are just the beginning of the potential control problems. Because of the low cost and ready availability of hardware and software, employees can now buy and experiment with exact duplicates of their employers' accounting programs. Modifications for their own benefit can be developed and introduced into the firms' systems. This can result in the creation of unauthorized payments and the shipment of unpaid-for merchandise.

A further refinement is the creation of self-destruct features that hamper reconstruction of the fraud should it be accidentally discovered. In fact, many commercial systems already contain a "delete function." Carl Heintz writing in *Interface Age* [May 1983, p. 84] refers to such functions as "dangerous," their indiscriminant use could cause a ledger to be "materially changed with precious little documentation to indicate the manner in which it was changed."

Why has the accounting profession allowed this problem to develop? One factor is the evolution of computerized accounting systems over the last few decades. When the computer was first introduced, its potential was almost immediately recognized. However, the costs were so staggering that a company could only afford a single processing unit. Separation of functions had to be eliminated because utilization of a single computer required centralization.

Such centralizations would have been unthinkable in the manual accounting environment. It was as if the large company now had a single, all powerful bookkeeper complete with all the problems on a grander scale inherent in a one-bookkeeper accounting system. The only control solution, and an inadequate one at that, was the same as for the small business with one accounting employee: close supervision.

Control sections were developed that manually compared inputs with outputs. High security was instigated limiting access to the hardware and software. Programmers were separated from operators. Operators were supposed to be individuals with little training or interest in computers beyond what it took to operate the equipment.

Accountants had been lulled to sleep by the fact that computerized systems had to be centralized because of cost. Many accountants were uncomfortable with the systems but reluctant to admit their lack of familiarity and understanding with the more modern ways of doing things.

The factor that created the need for centralization—high equipment cost—is no longer as significant as it once was. It is now possible for even small businesses to afford separate computers, separate software, and separate files for separate functions. All the benefits of a centralized system can be maintained through telecommunication, and the General Ledger can be restored to its position of "Grand Controller." As accounting system theory becomes more widely disseminated and understood, a return to the past may be a big part of the future of computerized accounting systems.

U. S. CONSUMER PRICE INDEX - U[1] (UNADJUSTED)
1967 = 100.0

Month	1978 CPI	1979 CPI	1980 CPI	Percent Change		1981 CPI	Percent Change		1982 CPI	Percent Change		1983 CPI	Percent Change		1984 CPI	Percent Change	
				Month Ago	Year Ago		Month Ago	Year Ago		Month Ago	Year Ago		Month Ago	Year Ago		Month Ago	Year Ago
Jan.	187.2	204.7	233.2	+ 1.4	+13.9	260.5	+ 0.8	+11.7	282.5	+ 0.4	+ 8.4	293.1	+ 0.2	+ 3.8			
Feb.	168.4	207.1	236.4	+ 1.4	+14.1	263.2	+ 1.0	+11.3	283.4	+ 0.3	+ 7.7	293.2	+ 0.0	+ 3.5			
March	189.8	209.1	239.8	+ 1.4	+14.7	265.1	+ 0.7	+10.6	283.1	- 0.1	+ 6.8	293.4	+ 0.1	+ 3.6			
April	191.5	211.5	242.5	+ 1.1	+14.7	266.8	+ 0.6	+10.0	284.3	+ 0.4	+ 6.6	295.5	+ 0.7	+ 3.9			
May	193.3	214.1	244.9	+ 1.0	+14.4	269.0	+ 0.8	+ 9.8	287.1	+ 1.0	+ 6.7	297.1	+ 0.5	+ 3.5			
June	195.3	216.6	247.6	+ 1.1	+14.3	271.3	+ 0.9	+ 9.6	290.6	+ 1.2	+ 7.1	298.1	+ 0.2	+ 2.6			
July	196.7	218.9	247.8	+ 0.1	+13.2	274.4	+ 1.1	+10.7	292.2	+ 0.6	+ 6.5	299.3	+ 0.4	+ 2.4			
Aug.	197.8	221.1	249.4	+ 0.6	+12.8	276.5	+ 0.8	+10.9	292.8	+ 0.2	+ 5.9	300.3	+ 0.3	+ 2.6			
Sept.	199.3	223.4	251.7	+ 0.9	+12.7	279.3	+ 1.0	+11.0	293.3	+ 0.2	+ 5.0	301.8	+ 0.5	+ 2.9			
Oct.	200.9	225.4	253.9	+ 0.9	+12.6	279.9	+ 0.2	+10.2	294.1	+ 0.3	+ 5.1						
Nov.	202.0	227.5	256.2[a]	+ 0.9[a]	+12.6[a]	280.7	+ 0.3	+ 9.6	293.6	- 0.2	+ 4.6						
Dec.	202.9	229.9	258.4	+ 0.9	+12.4	281.5	+ 0.3	+ 8.9	292.4	- 0.4	+ 3.9						
Annual Avg.	195.4	217.4[a]	246.8			272.4			289.1								
Annual Change	--	11.4	13.5			10.4			6.1								

[a] Revised.

[1] The Consumer Price Index for All Urban Consumers reflects the buying habits of about 80 percent of the non-institutional civilian population of the U.S. and also uses a market basket based on the 1972 and 1973 expenditure survey.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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1984 MID-SOUTH BUSINESS OUTLOOK

*Avron Fogelman**

I'm going to take the title of this conference literally. I'm going to give you the Mid-South business *outlook*, and I'm going to do it in one word. The outlook for business in the Mid-South is good.

Exactly how good depends on a lot of things:

First, it depends on who or what we compare ourselves to. If we compare what the economy of this area should produce in 1984 with what it did produce in 1981 or 1982, next year is going to be very good. If we compare the sheer dollars of this region with those of some sun-belt high-rollers, we might be disappointed.

Second, it depends on the level of our expectations. Are we looking for steady progress or a quantum leap? Will we settle for short-term gains or long-term momentum?

Third, it depends on the direction of our energies. Does the leadership of this community devote their time and resources to their own personal and professional pursuits? Or, will we finally give more of ourselves to the broad work before Memphis for its economic and social well-being? When do we start caring?

Fourth, exactly how good the Mid-South business outlook is depends the quality of our own performance—as individuals and as a community: Who can better determine our fate than ourself?

I don't have all the answers. The answers over the next 12 months have to come from you and me, from our business peers, our government leaders, and our fellow citizens.

I began by saying our prospects for the coming new year are good.

That is not mere optimism.

In the first place, most of the indices of the national economic recovery remain positive and, increasingly, we are all dependent on the economic ebb and flow of the nation and the world. While Memphis and the Mid-South may have lagged the U.S. resurgence by a few months, we are catching up. It is quite obvious that retail sales and housing starts continue on a strong upward spiral; and the most recent analysis from the Chamber of Commerce shows 159 new plants and expansions in the Memphis area through October 31, bringing more than 3,600 proposed new jobs and some $217 million in potential new investment. Compared to the same period of 1982, that's 35 more new plants and expansions, an increase in possible new employment of 869, and a rise in indicated investment of almost $250 million.

We have every reason to expect that the momentum of 1983 will continue well into 1984.

Second, and more pertinent to the purposes of this discussion, this community finally is in a new and strong position to take advantage of its own opportunities. Some of these are:

- Memphis-based companies like Federal Express and Holiday Inns are highly visible and well respected nationwide trend-setters of corporate leadership and growth and, therefore, are, in fact, dynamic image-builders for the city.
- The rebirth of Beale Street and a boom in commercial renovation and new construction in the downtown area gives us not only good economic health, but also the admiration of visitors and the confidence of developers and citizenry to create even more business formations.
- Also, in our Uniport program, in our tourism initiatives, and in our concept of a Biomedical Research Zone at the western edge of the Medical Center, we have the kind of organization and planning that are the keys to long-range and lasting economic development and jobs growth.
- By rescuing the International Harvester plant, we have demonstrated to the rest of the country that the old saying about Memphis not caring for the needs of labor or management is a bum rap, and, just as important, we have proved to ourselves that business and government can work together and produce something visible and constructive for the benefit of the whole community. We salute Mayors Hackett and Morris for their outstanding contributions in this successful effort.

And, there is much more heavy ammunition in the arsenal of this community; assets Memphis has built and continues to build are now well-known and part of the big picture that didn't exist a few years ago.

- New tourist and recreational facilities like Mud Island and Graceland and Shelby Farms.
- New offices and installations from national and international firms like Sharp Manufacturing, Williams-Sonoma, and Merrill, Lynch.

**The author is President of Fogelman Properties and President of the Memphis Area Chamber of Commerce. Presentation at Mid-South Business Outlook Conference, December 1983.*

- New capital projects like an enlarged Mid-South Coliseum, a renovated Orpheum Theater, and a new Convention Center hotel.
- New programs to provide financial assistance and incentives to business like the Minority Enterprise Small Business Investment Corporation (or MESBIC), the Center City Revenue Finance Corporation, and ongoing community forums like the Jobs Conference.
- A growing establishment of professional sports attractions like the Memphis Showboats, the Memphis Americans, and, if you will pardon me, the Memphis Chicks.

In short, on every front that really counts in the struggle for economic urban growth, stability, and progress we are indeed advancing. We are now aware, we are now active, we are, in fact, alive. All of us as a community then should be looking forward to 1984—and beyond—with eager anticipation.

As a businessman, as a Memphian, and especially as President of the Memphis Area Chamber of Commerce, I am excited about Memphis. I say especially in the case of the Chamber because the higher Memphis' star rises, the greater opportunity the Chamber has to serve the economic growth of Memphis.

In order for this area to capitalize on the list of advantages I've just identified, I believe there are three rather broad areas in which much of our community effort over this next year should be concentrated. As 1984 President of the Chamber, I will suggest three special task forces: (1) improvement of quality of life, (2) professionally marketing the city, and (3) developing the spirit of entrepreneurship.

I'd like to discuss each in a little detail from a community point of view and draw you a brief outline of what I will propose in the way of an action program when our new Chamber Board of Directors meets in January to adopt its official agenda for 1984.

But first, allow me just a few moments to give you some background on the Chamber's recent activity and why I believe this is the organization that is particularly well positioned now to enter into a leadership position in this new and more productive era for metropolitan Memphis.

Last year, the Chamber Board adopted a three-year strategic plan designed to reorganize the Chamber and prepare it to deal more effectively with the dramatic changes of this community.

In 1983, the Chamber committed itself to the future; we decided to focus our resources on this city's economic growth and develop a structure to face the issues and needs for long-term prosperity of the region.

We stopped looking back and started looking ahead. We have now officially ended a period of reacting to past events and begun an era of positioning the Chamber to control events yet to come. We are prepared to take the economic leadership role in concert with the thoughts of our mayors.

Back to the special task forces. It is an accepted fact today that business growth and relocation decisions turn less on questions of hardware and more on quality of life and amenities in a community. In other words, what Memphis offers in the way of land, roads, and utilities isn't as important as what Memphis provides in the way of art, culture, entertainment, friendliness, and recreation. In the first instance, most cities have become very much alike. Over the 1980s and 1990s, the winners in the race for growth are going to be those cities which make themselves the most *pleasant* places to live and work.

I know Memphis has long needed a competitive edge. One of them can be livability.

And that's why I'm proposing that the Chamber establish the task force on quality of life. Its mission will be to work closely with existing efforts in this area (like Mayor Bill Morris' Economics of Amenity Program), determine where the Chamber can provide direct, productive assistance, and then marshall the necessary resources to get the job done. Mayor Morris' Amenity Program will receive our top priority. Let us develop real livability and jobs will follow.

In the same fashion, I'm calling for a task force on marketing of this city—a need to reconceptualize metropolitan Memphis.

Mayor Hackett has indicated recently that he is interested in establishing a central office to be responsible for selling the advantages of Memphis. A professional marketing plan in a unified fashion is essential and has been a missing link in this city's development. As I indicated earlier, Memphis has the steak, but Memphis isn't selling the sizzle; and we'll not reach our full potential until we do.

Let's face it, beyond our own borders there is little concept of what Memphis is and what it might become. Yet the same business leaders of America who draw blanks about Memphis now have clear images of Baltimore or San Antonio or a dozen other cities with which we must compete every day. We need to put together a unified, comprehensive, and first-class act and get it on the road.

That's a big job and one that has been undertaken far too haphazardly in the past. A lot of people and groups, public and private, need to be involved. The Chamber stands ready to assist in these endeavors.

Finally, I'm going to suggest a task force aimed at promoting the spirit of entrepreneurship which so distinguishes the business history of Memphis.

It is a well-established fact that most new jobs in this country are created by small businesses, firms with fewer than 100 employees, and that remains a proper area of concentration for the community and the Chamber. But we have not focused on a singular part of the equation, namely that 41 percent of all new jobs flow from the start-up of new businesses. And it seems to me, that is a made-to-order target for the city that gave the world the forerunner of the modern supermarket, St. Joseph's Aspirin, Holiday Inns, and overnight package delivery.

How many new Clarence Saunders, Abe Ploughs, Kemmons Wilsons, or Fred Smiths may there be in this community who need not only encouragement, but some kind of specific help to put their inspirations and their dreams to work?

Whether it be innovative venture capital programs, or technical assistance, or management consultation, or regulatory relief, there must be ways to provide a unique environment in Memphis for entrepreneurial talent.

In this regard, I would also like to see some serious thought given to establishing here a hall of fame for local business leadership into which we could induct new members each year.

We celebrate the musical heritage of Memphis. Why shouldn't we also celebrate the business heritage of Memphis? When it comes to building images, we surely have rightful claims on both.

I am proposing task forces on quality of life, marketing and conceptualizing the city, and entrepreneurship because I believe these are the three most important themes for community-wide attention in 1984, because I want to set these efforts apart from the normal work of the Chamber's important standing committees and councils, and because I want them to be oriented to results. Jobs and economic growth will follow.

For the same reasons, and in an effort to provide challenging opportunities for Chamber officers and directors, I am also asking that the task forces consider outside experts to be engaged as they may deem desirable and necessary to be of assistance in conjunction with the mayors' offices.

Real economic development comes from the development of whole communities—from constant effort to build the city from the bottom up—and that requires the long-term commitment and concern of everybody in business and government and all civic interests.

Working together, we have a chance to make 1984 a landmark on the road to the greater Memphis that we all want. I recognize that there are limits to what we can do for Memphis in one year, but let us all see that there are no limits on what might come after this one year's accomplishments.

EXPORTING THE FEDERAL DEFICIT

Eliot Janeway[*]

The Complaint:

The extortionate interest rates resulting from astronomic deficits.

The Cure:

Export the deficit by selling to dollar-rich OPEC governments long-term, non-marketable Treasury paper subject to no interest charges until maturity.

The History:

No exercise in rediscovering the wheel is needed; fiddling with its old spokes will do the trick. The movement of money follows the movement of ideas. In the first chapter of American financial history, Alexander Hamilton imported from London Robert Walpole's thinking about how to re-fund a mountain of short-term debt into comfortable long-term paper. Hamilton's market operations then attracted the money of shrewd British speculators, who joined his Tory constituents in buying up the debt of the Continental Congress at deep discounts and converting it into his brand-new, gilt-edged "funded debt." During the Civil War, J. P. Morgan made his reputation by finding hard European money to relieve the Treasury of the pressure to place short-term paper. These two episodes, celebrated in forgotten tomes, illustrate the axiom that battles to defend currencies from deficits, like battles between armies, are best fought overseas. Hindsight has associated both victories with the growing pains of a young republic, but as America came of age she ignored the applicability of her struggle to remain maturely productive and avoid sliding into decadence.

More recently, in 1962, the Kennedy administration revived this approach without recalling its hoary tradition. It pioneered a device for placing nonmarketable, long-term Treasury bonds with governments that were dependent on the United States, friendly enough to admit it, and rich enough to help her. These instruments bear the official designation of Roosa Bonds. They were the creation of Robert Roosa, then the undersecretary of the Treasury for monetary affairs. A superb technician, Roosa designed these private placements to ease the pressure on the dollar that had developed with the rise in the U.S. balance-of-payments deficit. During 1961 and 1962, the deficit had jumped to $3 billion, which at that time seemed big enough to be troublesome; it put the dollar under a cloud, even though the United States was still running a comfortable trade surplus.

Beginning in 1962, the U.S. Treasury placed a total of $10 billion to $15 billion of Roosa Bonds with the three dollar-rich central banks. The West German Bundesbank took the lion's share. The Swiss authorities put their Good Housekeeping seal of approval on Roosa Bonds by buying some, and the Japanese authorities advertised their country's new status as a dollar power by following suit. This impressive achievement psychologically displaced an overwhelming amount of selling pressure on the dollar. Even more, it advertised the solidity of America's partnership with both her defeated former enemies and called attention to their financial strength and Washington's political determination to ensure the stability of the dollar. Interest rates were not a problem then, and Roosa Bonds carried coupons approximately equal to going market rates.

In any case, the consideration in this intergovernmental transaction was not yield but management of the dollar deficit. The maturities ran for two to five years. Moreover, the fine print made them readily extendable, if needed or even desired. More providential still as a token of the cooperative spirit Roosa inspired, they protected the United States against an exchange-rate penalty in the event of dollar weakness. However, as in the case of Hamilton's historic achievement and of Morgan's, Roosa's was shrugged off as relevant only to the specific problem he solved. Its applicability to the recurrence of the same problem in different form was forgotten, although the Treasury still routinely lists its nonmarketable debt in a special category.

Reagan had spent six full years on the campaign trail spouting slogans extolling the sanitizing, invigorating wisdom of "free-market forces" and deploring the government's heavy-handed intervention into their "miraculous workings." These same markets, supposedly straitjacketed by government interference, had by 1982 improvised a characteristically safe and shrewd defense against the erosive effect of insupportable interest rates in credit standings. This improvisation was simple enough to become an instant success in the Eurodollar bond market.

The new device was the "zero-coupon" bond. It was exactly what this descriptive tag suggested: a non interest-bearing bond issued at a more or less deep discount

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[*] *The author is a political economist and publisher of "The Janeway Letter," Janeway Publishing and Research Corporation, New York, New York. Presentation at Mid-South Business Outlook Conference, December 1983.*

(deeper if the credit rating of the issuer was lower but in any case redeemable at maturity for par). Corporations in need of long-term money and/or under pressure to raise cash easily placed bonds by the billions all through 1982. To be sure, some corporations with credit ratings less lustrous than Exxon's, let alone the U.S. Treasury's, accepted discounts of over 50 percent; others settled for maturities of no more than five years. So buying the Reagan prospectus and trusting the workings of the free market (which the Eurodollar market certainly is) calls for the U.S. Treasury to follow where corporate treasuries have led: into selling U.S. Treasury zero-coupon bonds to foreign buyers, subject to three caveats—that the buyers be governments, that the issues be nonmarketable, and that the discounts be nominal.

The Symptoms:

- Interest rates remaining unacceptably high, even when dropping drastically.
- Drops in interest rates—even temporary ones—destabilizing markets.
- Collapse of the economy becoming the condition for drops in interest rates.
- Pervasive fears, not just inside the securities market but throughout the economy, that insatiable governmental demands for credit would crowd out private claimants for the productive borrowings needed to produce the earnings needed to produce the tax revenues needed, finally, to reduce the deficit: a Catch-22.
- Another Catch-22 of the collapsed economy: collapsing tax collections and inflating tax refunds (to the point at which fiscal 1983 tax refunds of $112 billion, if avoided by a vigorous economic recovery, would have converted the $110 billion deficit into a $2 billion surplus).
- Volatility in the securities markets incited by speculation over Treasury/Federal Reserve maneuvers and manipulations for financing the debt, with market offerings inflating rates, and/or bank placements inflating the money supply.
- The paradox of hyped-up dollar strength resulting from foreign money alternately chasing usurious interest rates and speculative market profits, contributing to the collapse in the economy by overpricing American exports while inviting cheap imports.
- Early warnings of hyperinflation, Continental Congress style.

The Treatment:

In correspondence with Senator Slade Gorton of Washington in April 1982, I put forward a proposal for the United States to offer no-interest, nonmarketable, long-term bonds carrying a modest premium at maturity to Arab central banks in exchange for the guarantee of American protection. This approach recognizes that the sheiks continue to control the largest single foreign pool of dollar power, despite the political disaster they had engineered for themselves. The fact of their political impotence accentuates their need to use dollar power to buy protection. Terms: coupon, zero; maturity, twenty to forty years; discount, 10 percent; paydowns, none; face value, par. Alternatively, such a debt instrument could be issued at par but redeemed at par plus a 10 percent premium at maturity.

There is a political consideration for offering such a security to a Moslem country where receiving interest income is prohibited, though conspicuously flaunted by the sheiks. The usury issue is a provocation in the inflammatory world of Moslem politics. Profit made by cashing premiums paid by no-interest bonds at maturity, however, is permitted according to the Prophet. The no-interest feature would be an advantage to both parties in the transaction.

An alternative strategy would be to sell the Saudis the Federal Home Loan Mortgage inventory, for example, which consists of $100 billion of first mortgages, by offering them forty-year, non-negotiable U.S. government bonds at a discount but bearing no interest. These terms would relieve the Treasury of the cash drain from the debt and, in the process, reliquify the mortgage agency to resume home mortgage financing without a new appropriation by Congress and/or without burdening the market with new issues of its own. This is no idle theory. Such a deal was all but made by a consortium of American banks through my old friend Wilbur Mills in 1981, but Treasury Secretary Donald Regan successfully opposed it.

A second alternative strategy is to require foreigners buying American fixed assets to buy a limited number of zero-coupon, non-negotiable bonds per dollar of assets acquired (allowing them, however, the right to borrow up to 70 percent of the face amount of such bonds at U.S. banks). "Funk" money from all over the world has been pouring into the United States, not for the purpose of yield or profit but for safety. Foreigners sinking their money into American fixed assets (real estate or businesses) have been buying a fringe benefit in the form of an equity in the continuing existence of the United States as the last safe harbor for property. But they have not been obliged to pay an entry fee in the form of nonmarketable bonds, which would be cheaper than an entry tax because it would be a portfolio asset held until maturity.

For all the local authorities in any American community may know, when title to a piece of property in their jurisdiction passes to the custodianship of a bank from Frankfurt to Singapore or, for that matter, New York, the owners of record behind the veil of anonymity may be Soviet purchasing agents buying their kickbacks from American grain dealers or incumbents of the Kremlin buying insurance against an unlucky roil of the political dice. (When the nuclear arms race heated up in Europe, the Soviet fat cats began to favor Hong Kong as their favorite depository over Zurich, which was too close to the potential firing line.)

The United States has been slow to cash in on its monopoly as the world's money haven. Where else can money go? Japan denies foreigners the free right to purchase fixed Japanese assets, particularly to take title to land. The Arabs still impose the same prohibition, though anyone trying after the oil war went military would have been in the well-known position of trying to break into jail. Foreigners have become accustomed to routine closeouts elsewhere—devaluation, taxation, confiscation, exchange freezing, labor trouble—and increasingly attracted to U.S. havens.

The incentive feature for private investors would be the right to use such packaged bonds as collateral for borrowing 100 percent of their face amount in the Eurodollar market. The purchase of a $100,000 long-term, noninterest-bearing T-bond could be made the quid pro quo for every $1 million invested in the United States by a foreigner. Why give all the money seeking sanctuary free protection? No one complains about paying fees to enter Switzerland as a visitor commercially. Packaged with the zero-coupon bonds could be gold and silver "dollar eagle" coins, priced at a premium over the bullion market, as is done by South Africa, Mexico, Canada, and Peru. The bonds could be priced at par but with no premium at maturity; the price of the coins would offer sufficient incentive. "Dirty money" on a scale too large to count is routinely bidding to be laundered on terms less attractive.

The Recovery:

The condition of a stable recovery, first in the securities markets and then in the economy, is a drop in interest rates sustained long enough to break the Catch-22 chain reaction deflating the economy and inflating the deficit. The drop in interest rates manipulated by the Fed in the market vacuum of the summer of 1982 served as a short-run market tonic. While it lasted, however, Treasury spokesmen were quick to claim that the cost to the Treasury on interest paid while the deficit was rising was being reduced as substantially as if the deficit had been lowered.

Collateral Advantages:

- Help the Federal Reserve Bank of New York with its new mission of policing the Eurodollar market.
- Resurrect the unknown soldier of America's money battles, the old-time Yankee trader, and show that he is alive, well, and haggling again.
- Cut the spending side of the budget at its only flexible point: interest expense. At, say, a 15 percent rate for T-bills—a rate difficult to figure but easy to anticipate—every $100 million of debt frozen in the hands of client governments saves $15 billion of annual interest expense plus the cost of interest on borrowings to pay that interest.
- Bring down long-term U.S. interest rates in response to successful long-term debt financing.
- Provide a durable boon to the bond market.

ECONOMIC CHALLENGES AND OPPORTUNITIES FOR PROGRESS IN 1984

*John E. Gnuschke**

The purpose of this article is to provide a brief review of the performance of the economy in 1983 and then share with you the Bureau's forecast for 1984.

I would like to begin by highlighting several key determinants of the accuracy of our forecasts for 1984.

First, 1983 has been a year of recovery in nearly all respects and has set the stage for 1984. Real Gross National Product has increased in every quarter during 1983. This is in dramatic contrast to the declines in GNP experienced in 1982. After a fourth quarter 1982 decline of 1.3 percent, positive annualized quarterly growth rates have been 2.6 percent, 9.7 percent, and 7.7 percent for the first three quarters in 1983 and are expected to be between 5.0 and 6.0 percent during the fourth quarter. An unemployment rate of 10.7 percent in December 1982 has declined rapidly to 8.4 percent in November 1983. Capacity utilization rates have increased steadily from a low of 69.0 percent in December 1982 to 79.0 percent during the fall of 1983. Real personal income, declining throughout 1982, rebounded in 1983 and has led to increases in consumer spending and saving throughout the year. Inflation rates measured by consumer prices have continued to decline from the record highs of nearly 15.0 percent in 1980 to less than 4.0 percent in 1983. Similarly, interest rates, reflected by the prime rate, have declined dramatically from over 14.0 percent in August 1982 to less than 11.0 percent in August 1983. The year of 1983 has also been a period of revitalization for the retail trade, construction, and automotive industries. Weaknesses in commercial and office construction have been offset by the strong rebound of housing starts and sales. Rebounding domestic auto sales have also helped facilitate the recovery of automobile producers and associated firms throughout the nation. Clearly, 1983 has been a period of renewed economic strength and has set the stage for our forecasts for 1984.

The second major determinant of the accuracy of the 1984 forecasts is the accuracy of the assumption that the strength and duration of the national recovery will determine the strength of the recovery in the Mid-South. Any further evidence of a weakening recovery in 1984 followed by a deficit-driven recession in 1985 would severely constrain the Mid-South's recovery.

Any of the following national events would also have a dramatic impact on the recovery of the Mid-South in 1984 and the accuracy of our forecasts:

1. Renewed inflation driven by consumer spending, food, and energy price increases.
2. Deficit-driven tax increases which reduce disposable income, consumption, and savings.
3. Further devaluation of foreign currencies which increases export prices and reduces the attractiveness of goods produced in the Mid-South.
4. Interest rate increases which result from renewed inflationary pressures or an expanded budget deficit.
5. Expanded international conflict, particularly in the Middle East, with associated energy price hikes and shifts in domestic spending patterns.

Finally, the accuracy of our forecasts will be influenced by structural changes that continue to inhibit the growth of the Mid-South's economy. Distinctions between Mid-South cities in terms of industrial composition will mean that some areas of the Mid-South will benefit more than others from the recovery. Rural/urban distinctions and the reliance of rural areas on argiculture and the success of single industries will accentuate rural/urban differences in income and employment opportunities. Further declines in high-wage manufacturing in urban areas and the shift of employment to low-wage industries will accelerate the establishment of a permanent class of urban workers with few employment or income alternatives. These structural changes will serve to dampen the impact of the national upswing in business activity and may offset the gains expected for the Mid-South.

Since 1980, repeated economic shocks to this community have kept unemployment rates at high levels and have depressed income gains. A series of plant closings and layoffs led by the Firestone, International Harvester, John Morrell, Gordon's, *Press-Scimitar*, and Grace announcements have resulted in dramatic reductions in high-wage employment opportunities in Memphis. Rural areas of the Mid-South have also suffered from plant closings, a symptom of shifting demand, foreign competition, and antiquated capital equipment.

With these factors in mind, there is good evidence to suggest that the dismal performance of the economy since 1980 will not be repeated in 1984.

The forecast for 1984 includes the following: The Bureau estimates an optimistic 5.5 to 6.0 percent growth in GNP for the nation. Strong growth should continue during the first three quarters of 1984 and may be somewhat reduced in the fourth quarter. The slowdown in late 1984 will be associated with pressure to enact deficit-reducing taxes.

**The author is Director of the Center for Manpower Studies, Director of the Center for Public Sector Labor Relations, and Associate Professor of Economics, Memphis State University, Memphis, Tennessee. Presentation at Mid-South Business Outlook Conference, December 1983.*

For the nation, the Bureau estimates that unemployment will decline slowly in the first half of 1984 and will be 7.5 percent during the latter part of 1984. The Bureau also estimates that plant utilization will reach a level of 85.0 percent during 1984. Capital expenditures during the last half of 1984 should be particularly strong if signs of a strong recovery continue. Finally, the Bureau forecasts that inflation will increase between 5.0 and 5.5 percent in 1984. The key to inflationary pressure in 1984 will be strong consumer expenditures in the first two quarters and enlarged capital expenditures in later quarters. Federal Reserve policies have slowed the growth of the money supply and will continue to focus attention on keeping inflation fluctuating within a 3.0 to 5.0 percent band.

Bureau forecasts for the Memphis economy for 1984 depend heavily on the assumption that the 1983 recovery will continue through the end of 1984. During the first 10 months of 1983, for example, unemployment rates in Memphis fell from 10.7 percent to 8.7 percent. The Memphis rate compares favorably with the 9.5 percent rate for Tennessee and the 8.8 percent rate for the U.S. during October. Unemployment rates are expected to continue to decline throughout 1984 and reach 7.0 to 7.5 percent before the end of the year. Employee recalls; plant expansions; and thriving retail trade, distribution, and service industries should lead the way in reducing unemployment in Memphis.

Retail sales are expected to continue to rebound in 1984 on the basis of renewed consumer confidence, reduced unemployment, increases in home construction, and aging stock of durable goods. Retail sales for the first 10 months of 1983 were 10.8 percent higher than for 1982. A strong Christmas season combined with other factors should create a favorable market for retail goods throughout 1984. Housing should also experience a mini-boom in 1984. Clearly, many jobs in Tennessee are closely tied to the construction industry. From furniture production and textiles to tubs and tiles, many employers depend on a strong construction market to provide a demand for their products. On the heels of the renewed activity in 1983, the Bureau is forecasting total housing sales of 15,300 units in 1984. These sales amount to an improvement of 320 condos, 700 single-family new homes, and 1,000 existing homes over 1983 levels. This is a dramatic increase from the 1981-82 depression in the housing industry and should be good news to not only the real estate industry but to the wholesale and retail trade industry in the area. Finally, in general, the Memphis area has enjoyed modest but steady growth throughout 1983 and is expected to continue to do so in 1984. The Coincident Index of Business Activity for October 1983 was 146.4 (1967 = 100.0), the highest level since February 1980. The forecast for 1984 is that the Index will surpass its previous all-time high of 149.7, established in April 1979, sometime in the third quarter of 1984.

I believe this is good news for Memphis and for Mid-South business in general.

UNADJUSTED UNEMPLOYMENT RATE

	Oct. 1983	Oct. 1982	Peak
Memphis	8.7	9.7	10.7 Jan. 1983
Tennessee	9.5	11.5	13.7 Jan. 1983
United States	8.4	9.9	11.4 Jan 1983

RETAIL SALES, MEMPHIS SMSA ($000)

	Oct. 1983	Oct. 1982	% Change
Current $	$520.9	$432.3	+20.5
Constant $	$250.6	$213.6	+17.3

Year-to-date retail sales have increased 10.8 percent over the same period last year.

EMPLOYMENT—SEASONALLY ADJUSTED (000)

	Oct. 1983	Oct. 1982	Trough
Nonagricultural	353.2	355.4	352.3 June 1983
Manufacturing	56.2	57.3	55.9 May 1983

Memphis Coincident Index:

October level was 146.42, the 13th month of consecutive increase. September level was 146.29.

The compounded annual rate of growth is 5.5 percent since the recession hit its trough in September 1982.

GNP: Qtr. 1 . . . . 2.6
Qtr. 2 . . . . 9.7
Qtr. 3 . . . . 7.7

UNDERSTANDING POWER, DECISION MAKING, AND THE MIDDLE MANAGER

*Richard M. Daniels, J. Wayne Patterson, and Thomas W. Zimmerer**

> "For middle managers the best way to achieve promotions is by doing whatever will most please and impress their superiors, regardless of the effects of their actions upon profits of the firm" (Monsen & Down, 1977, p. 449).

The above statement is extremely strong and a condemnation of the road to success for middle managers. The purpose of this article was to investigate what has been written regarding the behavior of middle managers to determine if such a statement has any validity. Does the dynamics of organizational survival and success create such gameplayers? If, indeed, the statement is true, the decision made by middle managers and their use of information has some important implication on our assumptions of how organizations really operate.

In order to understand why the middle manager is the source of much of an organization's goal divergence, it is necessary to understand what motivates the typical middle manager as a person and as a member of an organization. The middle manager is a working person and, as such, his job is more than just a means of earning a living; it is in a very basic sense a definition of his identity as a member of society. The phrase "we are our business cards" has a lot of truth in it. Consequently, his job is extremely important to the American middle manager.

A key factor to the importance of his job, over and above earning a livelihood, is that it allows him to satisfy a basic need that is found to be common among managers. The basic need which motivates most managers is a need for power. This belief is held by McClelland, who stated: "Since managers are primarily concerned with influencing others, it seems obvious that they should be characterized by a high need for power" (McClelland, 1970, p. 31).

Therefore, it would appear that the typical bureaucratic business organization and persons characterized by a high need for power are well suited for each other. For as Zaleznik has observed, "Organizations operate by distributing authority and setting a stage for the exercise of power. It is no wonder therefore that individuals who are highly motivated to secure and use power find a familiar and hospitable climate in business" (Zaleznik, 1978, p. 708).

The person with a need for power is, therefore, drawn to the traditional bureaucratic business organization because it can bestow upon him the authority he needs to exercise his influence over others by assigning the person a position in the firm. This action immediately confers upon him three sources of power. First, he gains power through tradition, since subordinates believe that it is proper for them to obey people in legitimate positions of authority. Second, he gains power through fear, because he can apply sanctions against those who do not obey him. Third, he gains power through coercion, since he can offer rewards to those who obey.

In awarding a position to the manager, the company expects him to make decisions appropriate to his position in the firm. The conventional theory of scientific management espoused by Fredrick Taylor and stated by Tomeski holds that, "Management and supervision should be completely rational in planning and making decisions" (Tomeski, 1977, p. 283). Thus, the ideal manager is expected to carry out the various aspects of his job in an impartial, rational, and dispassionate manner. Beishon cites a basic assumption widely held by industry today:

> . . . the "man" within the "manager" acts solely with regard to the company's interests, he is assumed to be directing his activities toward achieving the company's goals and loyally serving the company at all times. Even where there is a conflict between a man's personal interests and those of the company, the man is expected to sacrifice his own interests (Beishon, 1977, pp. 307-308).

While industry may *assume* that managers are making their decisions in the manner described above, the reality of management is quite different. As Beishon goes on to state:

> The manager is *not* a rational, dispassionate being capable always of calm, considered decisions. He is a human being in a human environment; he has his own personal aims and aspirations which may differ from those of his superior and the company. He has a complex bundle of prejudices and distorted views of reality. He is almost always in competition with others to achieve success. His relationships with other people matter a great deal, often to

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> the exclusion of technical and commercial considerations (Beishon, 1977, p. 308).

Remembering that the manager was drawn to the organization to fulfill his need for power rather than achievement, we must recognize that the basis for his decision making may not, indeed probably will not, be a dispassionate and rational search for the optimum solution to meeting his company's goals. Instead, he may very likely base his search for a decision on how it may enhance his power. As Zaleznik has stated, "The development of careers, particularly at high managerial and professional levels, depends on accumulation of power as the vehicle for transforming individual interests into activities which influence other people" (Zaleznik, 1978, p. 709). Note that the vehicle for career development was power, not achievement and proficiency. Although power can come from achievement and proficiency, it can also be acquired without them as evidenced by many not particularly talented people in high corporate and government positions. With these thoughts in mind let us consider the ways in which the middle manager performs his basic function, making decisions.

Again, drawing from the work of Beishon, we find that there are a number of basic steps involved in making a decision.

> 1. The prospect or possibility of a choice or decision situation arising has first to be recognized.
> 2. Possible courses of action must be enumerated or actions taken to discover what the alternative actions available are.
> 3. The outcomes of the various courses of possible action and the implications of these outcomes for the company, the man, and his colleagues must be postulated. The probabilities of the actual predicted outcomes occurring must be assessed. These outcomes may also involve estimates of the likely reactions of the other people to the outcomes, and this can lead to an examination of a complete decision tree, as in examining an opponent's likely reply to a chess move.
> 4. Reference has to be made to the value system against which the outcomes are judged.
> 5. When the above steps have yielded information, the actual decision can be taken (Beishon, 1977, p. 310).

Note that in Step 3 we see that the manager is not only considering the effect of actions upon the company, which is what he is supposed to do according to conventional managerial theory, but he is also considering what effect it will have on himself and his colleagues. In other words, how will the decision affect his power relations with others? He may very well be thinking, "If I agree to do this which will help John, he will owe me support for my proposal next week" or "Even though I have evidence that the boss' plan won't work, I'm not going to tell him and have him at me." Worse yet, he may think, "I know John's plan won't work because the components won't take the strain, but I'll let him fail in front of the boss and then offer my alternate plan which will work." Such decisions have as their end not the achievement of the company's goals, but rather the manager's need to enhance his power.

All humans are essentially information processors, but as can be seen above it is the manager more than anyone who does little else but process information. Successful decision-making requires that the appropriate information be available at each step in the decision-making process. Managers learn that making good decisions or avoiding being held responsible for bad decisions will be awarded more power by the organization. Therefore, the key to making the "correct" decisions for his career lies in having the appropriate information at the right time. Consequently, access to more and better information is the means whereby the manager can enhance his power. Greater access to information can be achieved through both formal and informal means.

In a formal sense the manager can insert himself into information flows through his own authority or by having a superior insert him into the flow. Since information is the very life blood of an organization, it is essential for the manager to be as well informed as possible. As stated by Hampton, Summer, and Weber concerning the work of Michels:

> Hierarchies become strong and organizations autocratic because it is impossible to keep everyone informed no matter how much the members may desire democracy. Only a few can monitor the necessary information flows and know enough about what is going on to participate in organizational decisions. Those few who occupy critical communication points accumulate expert power and emerge as leaders who make decisions that affect others (Hampton, Summer, & Weber, 1978, p. 71).

Thus, the manager will strive to be included in the formal flow of information even though much of it may not pertain to him directly. Although he may be denied access to information in the formal flow, many managers will also use informal means such as well-placed friends, secretarial contacts, and eavesdropping to acquire it.

As was stated earlier, managers are given a certain degree of power by the position awarded them by the company, but to develop their careers they must expand that power from its rather limited traditional basis which is inherent in the position to the more powerful base of expertise. To achieve this the manager must have knowledge which comes from years of experience or exclusive sources of information. Since it is quicker to accomplish the latter, the manager's primary goal is to gain and control access to information. In addition, almost all of the manager's competitors and supervisors are dependent upon the supply of information in making their own decisions; therefore, the manager who can control that information gains a great deal of power over them.

From the foregoing we can conclude that the typical middle manager will be motivated by a high need for

MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

THE MID-SOUTH ECONOMY

U.S. economic recovery is now a year old. After back-to-back recessions in 1980 and 1981-82, the U.S. economy has expanded to the point where the level of non-agricultural payroll employment is near the pre-1980 recession level; and once the figures for the fourth quarter are in, 1983 should be above normal for the first year of recovery in terms of increased production, sales, and income.

While economic activity has out-distanced most economic analysts' expectations in 1983, the prospects of rising interest rates and continued high budget deficits, coupled with a deteriorating international trade position, have economic observers concerned that 1984 may get off to a shaky start. Meanwhile, on the positive side, continued strong productivity gains, increased manufacturing operating rates, and further gains in consumer real purchasing power due to low inflation may confound economic observers once again. The consensus forecast for 1984 is that real economic growth will moderate to 4.7 percent, versus the head-long pace of 6.3 percent in 1983, with the unemployment rate remaining in the 8.0 percent range. Inflation is anticipated to increase slightly to approximately 5.5 percent.

For the Mid-South states the growth in the civilian labor force has slowed, while total employment has increased. The Mid-South civilian labor force totaled 7,993,800 in October 1983, up only 0.9 percent from last October, while approximately 430,000 persons have been added to employment rolls since the beginning of the year. Sales tax collections have registered substantial gains in most Mid-South states, except Louisiana. For the year-to-date period, sales tax collections are up 5.8 percent over last year. Total deposits at Mid-South commercial banks increased 10.4 percent in October 1983 versus a year ago, outpacing the national gain of 9.2 percent.

Finally, the twenty-fifth anniversary issue of *American Medical News*, published by the American Medical Association, took a look back at some of the differences in medical care between 1958 and 1983. Highlights included: (1) the average net income after taxes for medical doctors was $16,000 in 1958 compared to $99,500 in 1983; (2) the average charge for office calls rose from $3.00 in 1958 to $18.50 in 1980; (3) per capita expenditures on health care rose from $146.30 in 1958 to $1,225.00 in 1983; and (4) hospital expenses per inpatient hospital day rose from $40.56 in 1958 to $215.75 in 1983.

LABOR

The total number of unemployed persons in the U.S. dropped below the 10.0 million mark in September 1983, causing the unadjusted unemployment rate to fall to 8.8 percent versus 9.7 percent last September. Manufacturing employment registered a seasonally adjusted increase of 1.6 percent, while non-manufacturing employment experienced a 1.3 percent gain from a year ago.

For the Mid-South states, the total number of unemployed persons totaled 849,700 in October 1983, a decline of 8.9 percent from last October. The aggregate unemployment rate stood at 10.6 percent in October 1983 versus an 11.7 percent rate last October. However, this was substantially above the 8.6 percent rate in October 1981. Manufacturing employment stood at 1,427,000 in October 1983, an increase of 35,300 over last October or 2.5 percent. Strong gains were experienced in Arkansas and Tennessee, up 6.5 and 5.1 percent, respectively. Louisiana was the only loser, down 3.5 percent from last October. Non-manufacturing employment dipped 0.5 percent from a year ago or some 26,000 jobs. Arkansas registered the best gain, up 1.0 percent over October 1982, while the rest of the Mid-South states remained virtually unchanged.

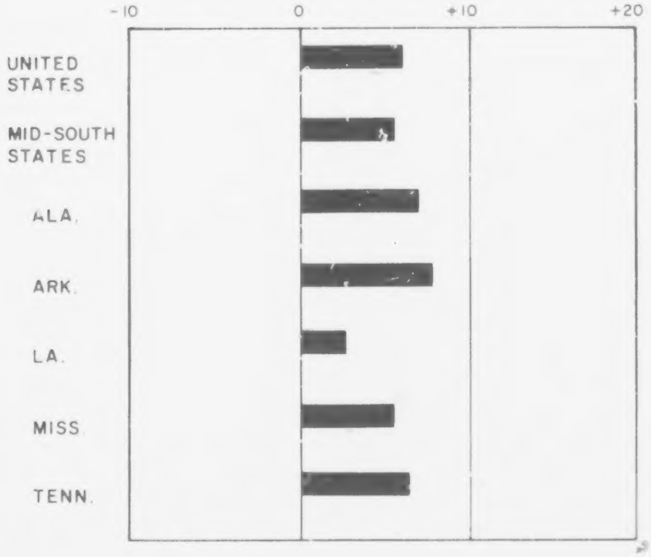
All of the Mid-South states, except Louisiana, registered solid gains in average weekly earnings for production workers, outperforming the national increase of 8.5 percent. In addition, all the Mid-South states outperformed the nation in registering gains in the average hourly pay of production workers.

CONSTRUCTION

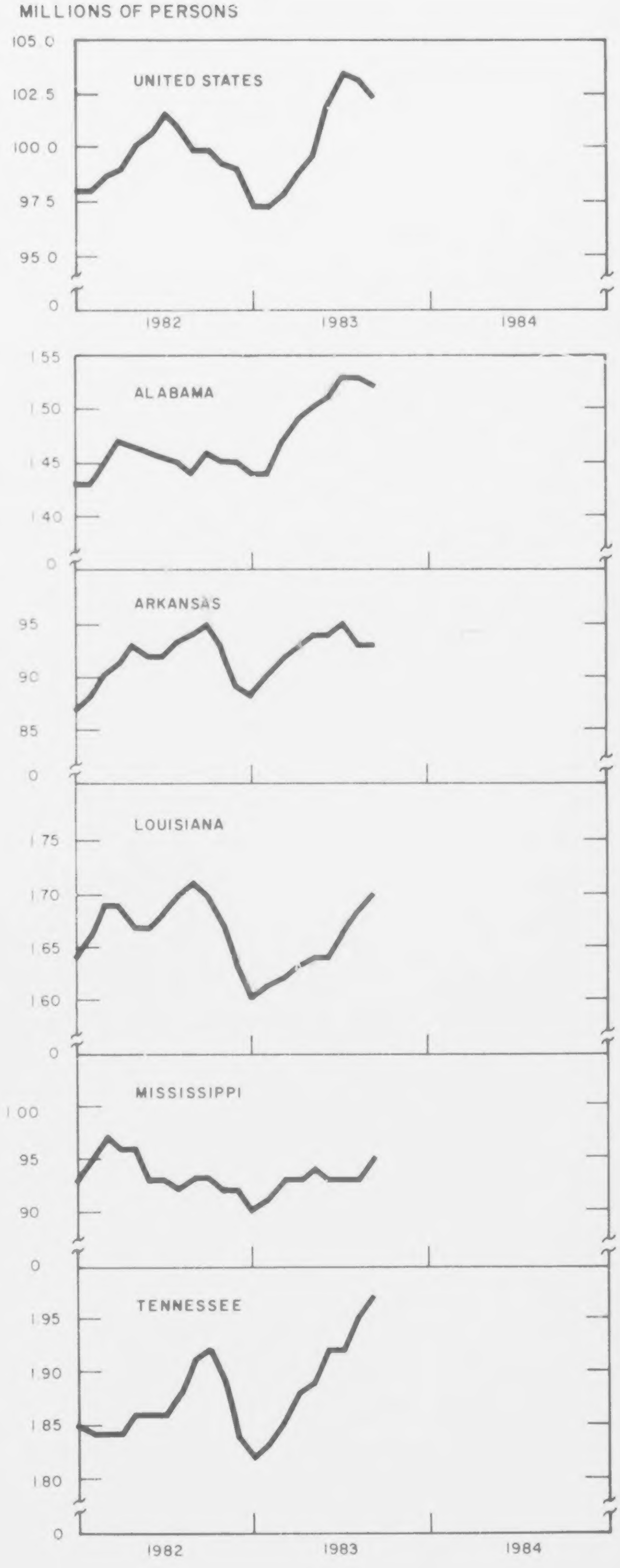
For the twelve-month period ending September 1983, the dollar value of building permits in the U.S. totaled $112.4 billion, an increase of 37.2 percent over the

PERSONAL INCOME - II QTR. 1983

PERCENTAGE CHANGE FROM 1982

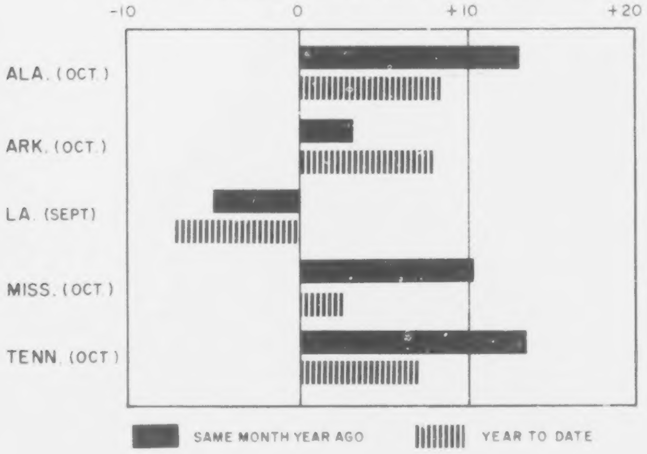


TOTAL EMPLOYMENT



SALES TAX COLLECTIONS 1983

PERCENTAGE CHANGE FROM 1982



SOURCES: BUREAU OF ECONOMIC ANALYSIS
STATE DEPARTMENTS OF EMPLOYMENT
SECURITY AND REVENUE.

comparable period in 1982. Residential construction activity registered a healthy gain of 77.3 percent, while non-residential activity experienced a modest increase of 6.2 percent.

For the Mid-South states, excluding Arkansas, the dollar value of all building permits for the twelve-month period ending September 1983 totaled $5.2 billion, up 48.6 percent over the comparable 1982 period. The dollar value of residential permits totaled $2.6 billion, 91.2 percent higher than the comparable 1982 period. The number of dwelling units over the same period jumped 86.7 percent to total 81,400 units. Tennessee registered the best performance in the residential sector with a 136.2 percent increase in the dollar value of permits over 1982 and a 114.1 percent increase in the number of dwelling units.

Non-residential activity totaled $2.5 billion for the twelve months ending September 1983, an increase of 21.2 percent. Louisiana turned in the best performance in this category, up 37.7 percent over 1982. The gains were registered in the offices, hospitals, and schools sectors.

Elsewhere, the National Association of Realtors' Housing Affordability Index stood at 82.4 in September 1983. What the index figure means is that a household earning the U.S. median family income of $24,383 had 82.4 percent of the income needed to qualify for the purchase of a median-priced existing home which cost $70,400 in September. The index, however, remains far below the 100 mark which was last reached in December 1978. The typical monthly principal and interest payment stood at $617 per month in September 1983 with a 12.86 percent average loan rate.

FINANCE

Commercial bank deposits in the Mid-South totaled $80.5 billion in October 1983, an increase of 10.4 percent from last October, outperforming the national increase of 9.2 percent. The component of savings deposits registered a healthy increase of 105.9 percent over a year ago, while time deposits experienced a 5.6 percent decline.

Mortgage lending activity by Mid-South savings and loans totaled $497.5 million in October 1983, up 150.6 percent from October 1982 levels. On a year-to-date basis, total mortgage lending activity totaled $4.9 billion as of October 1983, more than double the lending levels registered in the comparable 1982 period. Net savings flows are also registering substantial gains from their levels of a year ago.

LABOR 1983	United States	Mid-South States				
		Alabama	Arkansas	Louisiana	Mississippi	Tennessee
	(Sept.)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Civilian Labor Force	112,197,000	1,769,200	1,022,200	1,929,300	1,064,800	2,208,100
Percent Change Year Ago	+1.2	+ 1.0	-2.0	+1.9	- 0.4	+ 2.8
Unemployed	9,430,000	218,800	91,300	210,400	117,000	204,200
Percent Change Year Ago	-8.1	-8.5	-2.1	-2.4	- 1.7	-11.7
Unemployment Rate						
1983	8.8	12.4	9.3	10.9	11.0	9.1
1982	9.9	14.3	9.7	11.5	11.1	11.3
Non-Agricultural Wage & Salary Employees	90,495,000*	1,310,000	695,200	1,590,000	744,800	1,613,500
Percent Change Year Ago	+2.2	+0.7	+0.4	-0.8	+ 0.1	+ 3.8
Manufacturing Employment	19,454,000*	346,200	207,200	189,200	207,800	[illegible]
Percent Change Year Ago	+1.0	+ 1.2	+8.0	-0.1	+ 0.9	+ 3.1
Non-Manufacturing Employment	71,014,000*	963,800	508,000	1,401,500	542,000	1,170,900
Percent Change Year Ago	+1.3	+ 0.2	+0.0	-0.1	+ 0.8	+ 0.1
Average Weekly Earnings of Production Workers in Manufacturing	$362.64	$318.11	$292.11	$444.33	$276.44	$311.57
Percent Change Year Ago	+8.5	+9.8	+9.7	+2.3	+4.8	+10.6
Average Weekly Hours of Production Workers in Manufacturing	40.7	41.7	41.0	40.0	40.6	40.1
Percent Change Year Ago	+4.6	+4.8	+4.1	+1.2	+2.5	+3.4
Average Hourly Earnings of Production Workers in Manufacturing	$ 8.91	$ 7.61	$ 7.11	$ 9.84	$ 6.82	$ 7.98
Percent Change Year Ago	+1.7	+4.9	+3.2	+1.8	+3.9	+5.0

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1]	September 1983	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building Percent Change Year Ago		+37.2	+32.1	N.A.	+59.6	+48.9	+ 56.7
Residential Building Percent Change Year Ago		+77.3	+79.4	N.A.	+67.1	+87.0	+136.2
Non-Residential Building[2] Percent Change Year Ago		+ 6.2	+ 7.0	N.A.	+37.7	+13.8	+ 10.1
Total Dwelling Unit Percent Change Year Ago		+71.5	+88.1	N.A.	+73.2	+63.3	+114.1

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

FINANCE 1983	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of 10/5/83 Percent Change from Comparable Date 1982							
Total Deposits	+ 9.2	+ 10.4	+ 9.5	+16.5	+ 8.9	+ 10.0	+ 11.2
Demand Deposits	+ 2.0	+ 0.4	+ 3.7	+ 5.0	- 2.5	+ 2.2	- 0.1
Time Deposits	- 15.2	- 5.6	- 6.6	+21.4	- 6.8	- 10.8	- 9.8
Savings Deposits	+126.4	+105.9	+98.2	+18.0	+115.8	+225.1	+131.5

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY October 1983	Alabama	Arkansas	Louisiana	Mississippi	Tennessee[1]
Mortgage Loans Made (millions)	$ 55.1	$ 139.9	$181.0	$ 43.2	$ 78.1
Percent Change Year Ago	+176.5	+ 204.8	+ 98.5	+160.2	+ 214.4
Percent Change Year-to-Date	+271.2	+ 337.3	+146.7	+217.5	+ 181.9
Net Savings Flow (millions)[2]	$ 33.2	$ 24.4	$ 68.5	$ 3.0	$ 28.5
Percent Change Year Ago	+125.8	+ 227.1	+ 12.1	+130.9	+2404.8
Percent Change Year-to-Date	+122.6	+1186.7	+213.4	+188.4	+ 271.1

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

Total non-agricultural employment in October 1983 increased by 29,900 persons over October 1982, an increase of 1.8 percent. Manufacturing employment registered a gain of 5.1 percent from a year ago. All sectors in the durable goods category registered gains from a year ago, with the best gains coming in the textiles, apparel, and printing/publishing sectors. In the non-manufacturing category, employment remained virtually unchanged from a year ago. However, solid employment gains were registered in the retail trade, services, and state/local government sectors. The unadjusted unemployment rate was 9.5 percent in October 1983, versus an 11.5 percent rate last October. The Tennessee Department of Employment Security also reported that the unemployment rate increased in fifty counties, decreased in thirty-eight counties, and remained unchanged in seven counties.

The Tennessee Department of Economic and Community Development reported that for the first nine months of 1983 manufacturing investment totaled $725.4 million, which exceeds the previous record high of $617.7 million set in 1980. A total of 12,359 new jobs will result from the 202 new and expansion industrial projects announced so far in 1983, the most new jobs recorded since quarterly reports began in 1976.

For the twelve-month period ending September 1983, the dollar value of non-residential building permits totaled $742.4 million, up 10.1 percent over the comparable 1982 period. Solid gains were registered in industrial, offices, and stores sectors. However, declines were experienced in the hospitals and schools sectors.

On the residential side, for the twelve-month period ending September 1983, the dollar value of permits totaled $933 million, up 136.2 percent over the comparable 1982 period. Single-family dwelling units totaled 13,226, up 100.0 percent from a year ago, with multi-family units increasing 129.0 percent to 14,223.

Commercial bank deposits in Tennessee for October 1983 registered an increase of 11.2 percent from last October. Demand deposits remained unchanged, with time deposits declining 9.8 percent. Savings deposits rose 131.5 percent from the level of a year ago.

Total deposits at Tennessee's savings and loans increased 11.6 percent, with NOW accounts registering a gain of 82.6 percent to total $210 million for October 1983. However, time deposits registered a decline of 2.5 percent. Total lending activity at Tennessee's savings and loans was $78.1 million in October 1983, up 214.4 percent from last October's level. For the year-to-date period, Tennessee's savings and loans lent $619.0 million compared to $219.5 million for the first ten months of 1982.

Tennessee's credit unions also registered solid gains with total deposits up 14.2 percent from last October, outperforming total deposit growth rates for both commercial banks and savings and loans. Share drafts managed a solid gain of 28.3 percent from their levels a year ago.

For the agricultural sector, continued drought conditions reduced prospects for Tennessee's crop production. The 1983 corn and soybean productions are, respectively, 52.9 and 48.6 percent below 1982 levels. Additionally, Tennessee's 1983 tobacco crop is 37.0 percent below 1982, while the cotton crop is expected to be 53.0 percent below last year—the second lowest production level on record. Also, harvested acres for winter wheat have declined from 935,000 in 1982 to an anticipated level of 630,000 for 1983. Meanwhile, the index of prices received for all farm products in Tennessee for October 1983 increased nine index points from last October to stand at 132.0 of its 1977 = 100.0 level. Crop prices have registered dramatic gains from a year ago, up some twenty-nine index points. However, livestock prices have dropped some ten index points to stand at 131.0 for October 1983.

power, will occupy a managerial position in a traditional bureaucratic business organization which emphasizes relationships between people, will seek to develop his career through accumulating more power to influence others, and will learn that the control of information is the quickest way to accumulate power.

The Effects of Power on Organizational Dynamics

As noted earlier, the typical business organization is a bureaucracy and, as such, assumes that managers of the organization will make decisions that further the goals of the organization. The problem with such rational models of decision making is that what is rational to one person may be viewed as irrational by another. Everyone has his own ideas about proper priorities in a just world. Thus, goals rather than being clearly defined and universally agreed upon become blurred and contested as they are distributed throughout the organization. If such is the case (and in large managerial firms it is almost universally the case), then decisions taken on behalf of the organization as a whole are likely to reflect the goals of those who prevail in political contests and have thus acquired the power in the organization. How is such power acquired and used? We have already seen some of the techniques used by individual managers to acquire power; in addition, there are certain organizational dynamics that dictate who gets power.

Salancik and Pfeffer (1977) argue that organizational power derives from what they call a strategic contingencies theory, which in summary means that as an organization grows, those subunits which can meet the critical needs of the organization to supply the demands of the environment it serves will realign the organization's structure through their ability to influence resource allocation. This realignment of the structure and resources keeps the organization in tune with its environment (Salancik & Pfeffer, 1977).

Power also seems to influence the selection of individuals to key leadership positions, which is another means of aligning the organization with the needs of the environment. In this context power can be the adaptive mechanism whereby an organization responds to the needs of its environment, but this is not always the case and is rarely the case for any given organization over time.

Implied in the strategic contingencies theory of power is the need for the organization to adjust its power bases in accordance with the needs of the environment *continually*. Salancik and Pfeffer point out an important contradiction in the use of organizational power. It is first derived from the contingencies facing an organization; but when these contingencies change, so do the bases for power. Thus, power should flow to the new bases, but power tends to be sticky. As we have just seen in our analysis of the middle manager, he is motivated by power and strives hard to acquire it; he will not give it up easily.

This leads to what Salancik and Pfeffer (1977) speak of as institutionalized forms of power, by which they mean the establishment of relatively permanent structures and policies that favor the influential subunit. Because of the power it holds due to the organization's critical need of its services, the influential subunit can construct rules, procedures, and information systems that limit the potential power of others while reinforcing its own. The ability to structure information systems is seen as an especially strong source of power, since those who have information are in a better position to interpret the organization's problems, and they will do so to their own advantage. This view is further corroborated by Mason and Mitroff who stated:

> All organizations have patterns of authority, task allocation schemes and degrees of centralization (or decentralization) of decisions that influence the collection, processing, and flow of data. Welinsky has shown that hierarchy, specialization, and centralization tend to create "information pathologies" (e.g., secrecy, blockage, withholding information, leaks, distortions, etc.) in an organization (Mason & Mitroff, 1973, p. 480).

Since managers are well aware of the role information plays in the maintenance of power, the information flow throughout the firm will reflect the structural distortions which they have created. In addition to distorting the information flow, the managers will, over time, progressively constrict and pollute the information to meet their own needs rather than those of the organization as a whole.

The combination of the power-motivated manager and the characteristics of the rational bureaucratic business organization which allow the unchecked exercise of power seems to spell the inevitable stagnation and decay of all such organizations. Salancik and Pfeffer (1977) note, however, that power is not the dirty business it is often made out to be because it is one of the few mechanisms for reality testing in the organization. The cleaner forms of power, the institutionalized ones, rather than having the virtues they are often credited with are, in fact, the very factors which can lead the organization to become unresponsive to the changing environment. They go on to state:

> The real trick to managing power in organizations is to ensure somehow that leaders cannot be unaware of the realities of their environments and cannot avoid changing to deal with these realities . . . . One conclusion you can, and probably should, derive from our discussion is that power—because of the way it is used—will always result in the organization suboptimizing its performance (Salancik & Pfeffer, 1977, p. 20).

Since power is both a motivating force in the manager and a factor in organizational dynamics, it is probably the most significant force in the distortion of organizational structure.

Summary and Implications

One must conclude that an individual who seeks and obtains a managerial position has a basic desire or need for power. In order to maintain power, and in most instances increase it, the manager's decision-making behavior will be affected. This means that at times the middle manager may have a decision to make that puts his personal goals in conflict with the goals of the organization. When this occurs, the manager often does not follow the ideal or "rational" approach to making decisions. Obviously, not all decisions could be made in an irrational manner or the objective of maintaining and increasing power would not be attainable for the manager.

A factor which ultimately affects the decision-making process is the quality of information available to the manager. One should note that access to "exclusive" information contributes to the personal need to maintain and enhance the middle manager's power.

This does not mean power is the only thing that motivates middle managers, but it is meaningful to consider the effects that the need for power have on the middle manager's behavior as he must solve the conflict between personal and organizational goals for the long-term survival of both. In order to accommodate the needs of both, it is necessary that organizations recognize the potential conflicts they may be creating and then take the steps necessary to minimize the negative impacts. The first and most fundamental step is the open recognition by management of the games allowed within organizations to enhance personal self-esteem and those which are actually encouraged by the management system. The culture of the organization too often contains a lengthy series of acceptable managerial practices which, when exposed to the objective light of day, result in organizations achieving less than their potential. One of the most valid criticisms of American businesses has been based on their fixation with short-run performance at the cost of long-run success. In rapidly growing organizations you can outrun your managerial sins. Short-run organizational performance increases personal power and prestige and heightens the probability of promotion. In a world of international competition for markets, we must ask ourselves if we have allowed the expediency and pleasure of organizational combat to endanger our future competitive position. Organizational survival demands that we review managerial behaviors of the past to determine if they are acceptable now and in the future.

REFERENCES

Beishon, R. J. "Information Flow and Manager's Decisions," in T. V. Dock, U. P. Luchsinger, and W. R. Cornette (Eds.), *MIS: A Managerial Perspective*. Chicago: Science Research Associates, 1977, pp. 306-313.

Dock, T. V.; Luchsinger, U. P.; and Cornette, W. R. (Eds.). *MIS: A Managerial Perspective*. Chicago: Science Research Associates, 1977.

Ein-Dor, P., and Segev, E. "Organizational Context and the Success of Management Information Systems," *Management Science*, Vol. 24, No. 10, June, 1978, pp. 1064-1077.

Hampton, D. R.; Summer, C. E.; and Weber, R. A. *Organizational Behavior and the Practice of Management*. Glenview, Illinois: Scott, Foresman and Company, 1978.

McClelland, D. C. "The Two Faces of Power," *Journal of International Affairs*, Vol. 24, No. 1, 1970, pp. 29-47.

Mason, R. O., and Mitroff, I. I. "A Program for Research on Management Information Systems," *Management Science*, Vol. 19, No. 5, January, 1973, pp. 475-485.

Monsen, J. R., Jr., and Downs, A. "A Theory of Large Management Firms," in D. E. Summer, J. J. O'Connell, and N. S. Perry, Jr., *The Managerial Mind*. Homewood, Illinois: Richard D. Irwin, Inc., 1977, pp. 447-450.

Salancik, G. R., and Pfeffer, J. "Who Gets Power - and How They Hold On to It: A Strategic - Contingency Model of Power," *Organizational Dynamics*, Vol. 5, No. 3, Winter, 1977, pp. 2-21.

Summer, D. E.; O'Connell, J. J.; and Perry, N. S., Jr. *The Managerial Mind*. Homewood, Illinois: Richard D. Irwin, Inc., 1977.

Tomeski, E. A. "Building Human Factors Into Computer Applications: The Computer Profession Must Overcome a 'Jackass Fallacy,'" in T. V. Dock, U. P. Luchsinger, and W. R. Cornette (Eds.), *MIS: A Managerial Perspective*. Chicago: Science Research Associates, 1977, pp. 280-287.

Zaleznik, A. "Power and Politics in Organizational Life," in D. R. Hampton, C. E. Summer, and R. A. Weber, *Organizational Behavior and the Practice of Management*. Glenview, Illinois: Scott, Foresman and Company, 1978, pp. 708-724.

ATTORNEYS AND EXPERT FINANCIAL WITNESSES

*Linda M. Marquis and Virginia M. Moore**

Attorneys frequently draw from the professional community and the ranks of academia in providing expert witnesses for the defense and prosecution of various legal cases. Accountants and economists, as well as professors from colleges, have been called upon to testify in many matters where expert financial testimony is required.

One area of concern is the need of the legal profession for competent, expert witnesses in the financial area. Lawyers and corporations are searching for business professors with specialized research interests who are willing to testify in complex legal cases (Bellew, 1981). Legal journals are beginning to carry articles dealing with using experts in financial, technical areas (Drossman, 1982; Benkin, 1979; Finfrock & Spradlin, 1978; *Insurance Counsel Journal*, 1976; Meckler, 1980; Stotsenberg, 1980). Unfortunately, economists, accountants, and other financial experts have not expended much effort in educating the legal and financial community in the role of the expert (Wright, 1977, 1980).

The purpose of this research was to determine how attorneys use expert financial witnesses and how lawyers select the types of experts needed for their cases.

When cases involve potentially huge settlements or well-known, well-publicized names, attorneys are apt to choose equally well-known financial witnesses. But a far larger number of cases involve less interesting facts and small settlements resulting in the selection of more localized expert witnesses. What the current literature does not indicate is an adequate match between the attorney's needs in these situations and the financial witness' expertise. In order to determine if attorneys are fully aware of the areas of expertise and take advantage of these experts, a study of this area was undertaken. Specifically, this project provides some preliminary answers to the following questions: In what kinds of cases does the attorney use expert financial witnesses? Does the attorney use different expert witnesses for different types of cases? What does the attorney look for in selecting (and continuing to use) an expert financial witness? What types of financial backgrounds would the attorney desire in his expert witnesses? What can the expert expect to be paid for his services? Is it more likely that an expert financial witness will be used by the attorney for the plaintiff or the defendant? Is use of an expert financial witness related to the attorney's length of time in practice, form of practice, size of practice, or size of community?

Methodology

A pretest questionnaire was administered to a small group of attorneys. Necessary adjustments to the questionnaire were made before conducting the actual survey. A random sample survey was made of the Tennessee Trial Lawyers Association and the Tennessee Defense Lawyers Association. The membership lists of these two organizations were merged, and any attorneys holding dual memberships were included in the population count only once.

The questionnaire consisted of two sections. Section I related to the attorney's professional background and demographic variables. Particularly relevant was the type of practice, the percentage of the attorney's practice in the various areas, and the experience with expert witnesses. Additionally, the form of practice, number of partners, size of community, and length of time in practice were questioned.

Section II of the questionnaire involved the attorney's use of expert financial witnesses. These questions were predominantly information questions, although some of the areas tapped attitudes and opinions. An inquiry was made into the lawyer's use of experts on behalf of either the plaintiff or the defendant for either trial preparation or actual courtroom testimony. The attorneys were given a choice of the type of case for which they most frequently used expert witnesses. They were also given a choice as to the types of experts they most often used as expert witnesses. Finally, the survey queried the characteristics initially used in selecting an expert witness and the characteristics considered in continuing to use the expert witness. The remaining questions dealt with the fees charged by the expert witnesses and how the attorneys located the expert witnesses.

Although the questionnaire was designed with specific response choices, the attorneys were given the opportunity to add other choices and to include any relevant comments or experiences.

One hundred fifty-three usable responses were received, resulting in a response rate from the two mailings of 48.0 percent. One hundred and twenty-nine usable responses

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came from members of the Trial Lawyers Association, and 24 usable responses came from the Defense Lawyers Association. The difference in response rates between the organizations was not significant.

Table 1 shows demographic information on the respondents. This total of data on demographics was also broken down by organization (i.e., Trial Lawyers Association and Defense Lawyers Association) and by response to whether or not the attorney utilized expert witnesses.

Table 1
DEMOGRAPHIC PROFILE OF RESPONDENTS

Characteristics	Percent Who Use Expert Witnesses	Percent Who Do Not Use Expert Witnesses
Membership		
Trial Lawyers Association	83.3	85.7
Defense Lawyers Association	16.7	14.3
Time in Practice		
Less than 6 years	26.7	50.8
6 to 10 years	22.2	12.7
Over 10 years	51.1	36.5
Form of Practice		
Sole practitioner	14.4	24.1
Few partners	71.1	55.2
Large firms	14.5	20.7
Size of Practice		
Under 5 partners	59.2	57.8
5 to 10 partners	26.3	13.3
Over 10 partners	14.5	28.9
Size of Community		
Under 20,000	21.6	25.9
20,000 to 100,000	28.4	19.0
Over 100,000	50.0	55.1
Total Population	58.8	41.2

Results

Who Uses Witnesses?

Familiarity with the legal profession led to the speculation that trial lawyers would be more likely to use expert financial witnesses than would defense lawyers. In a case requiring "fact" testimony, if the plaintiff's attorney had used an expert financial witness, and if the facts on which the expert's testimony were based were correct, then a defense lawyer could do little damage by way of rebuttal with any other expert financial witness. In cases involving "opinion" testimony, a search for an expert with a specified point of view could provide testimony to rebut the opposition. A one-sample chi-square showed no significant difference between the percentage of trial lawyers using expert financial witnesses and the percentage of defense lawyers using expert financial witnesses.

Attorneys who had practiced law for more than five years were anticipated to be more likely to have used expert financial witnesses. These attorneys would have had time to encounter a greater variety of cases and also gain enough experience to know how to use an expert financial witness. The chi-square statistic showed a significant difference between the time in practice and the usage of expert financial witnesses, i.e., the attorneys with more years of experience were the ones who used expert testimony.

The business form that the attorney chose to use for his practice was hypothesized to have no effect on the likelihood of using expert witnesses. Surprisingly, the differences in forms were significant. However, the form of the practice may be related to the number of partners. The size of the practice (in terms of numbers of partners) was significant in the relative use of expert financial witnesses. As expected, those who practiced with many partners were less likely to have used expert witnesses than those who practiced in small partnerships. This is probably due to the degree of specialization evident in larger law firms that does not exist in smaller organizations.

Finally, the size of the community was hypothesized to have no impact on the likelihood of using expert witnesses. The chi-square statistic showed no significant difference between the behavior of attorneys in large cities and those in more rural locations.

When Experts Are Used

The lawyers who responded that they did use expert financial witnesses were asked how often they used these expert witnesses on behalf of the plaintiff and on behalf of the defendant. The difference in the relative frequency of using expert witnesses for the plaintiff and for the defendant was significant.

However, in contrast, trial lawyers apparently use expert financial witnesses on behalf of the plaintiff (or defendant) as frequently as defense lawyers use expert witnesses on behalf of the plaintiff (or defendant).

Based upon experience with the legal profession, expert witnesses were thought to be used frequently for trial preparation. Many cases are settled before they go to court, and, thus, expert financial witnesses may often supply reports but never actually testify. However, in the attorneys surveyed, no significant difference existed between the usage of expert witnesses for trial preparation and the use of expert witnesses in court.

Criteria for Selection of Witnesses

Characteristics of expert witnesses were an important consideration. Two time frames were used: initial selection of an expert financial witness and the continued usage of the expert financial witness. Courtroom presence and experience in the area ranked extremely high initially, with professional certification a close third. In continuing to use an expert witness, though, attorneys look at the courtroom presence or demeanor of the witness. Attorneys who did not consider courtroom presence as a factor initially were likely to consider this a major factor if they chose to continue to use the witness.

Attorneys who considered the witness' experience in the financial area, his professional experience, or his past witnessing experience as important factors in selecting an expert witness initially were not likely to consider these factors when determining whether to use this witness for other cases.

Kinds of Cases and Experts

The attorneys surveyed were asked to rank the types of cases for which they used expert financial witnesses. The frequency of the various responses is shown in Table 2. The predominant cases were wrongful death and permanent personal injury. Insurance losses and divorce settlements were the third and fourth choices of the attorneys.

Table 2
TYPES OF CASES

	Attorneys' First Choice		Attorneys' First Three Choices	
Type of Case	Frequency	Percent	Frequency	Percent
Permanent Personal Injury	39	38.5	66	29.8
Wrongful Death	36	35.6	65	29.4
Insurance Losses	7	6.9	28	12.7
Divorce	4	4.0	23	10.4
Tax	4	4.0	4	1.8
Corporate	3	3.0	12	5.4
Bankruptcy	2	2.0	3	1.4
Estate Settlements	1	1.0	7	3.2
Partnership Dissolutions	1	1.0	6	2.7
Other	4	4.0	7	3.2

Since economists are likely to speculate on the economic losses of wrongful death and permanent personal injury cases, the results to the question concerning the types of individuals used as expert witnesses were not surprising. The overwhelming selection was professors of economics. The second choice was Certified Public Accountants. Table 3 illustrates the types of individuals selected as expert financial witnesses.

Table 3
TYPES OF FINANCIAL EXPERTS

	Attorneys' First Choice		Attorneys' First Three Choices	
Types of Witnesses	Frequency	Percent	Frequency	Percent
Professors of Economics	42	46.2	56	27.8
CPAs, Practicing Accountants	29	31.8	55	27.4
Professors of Accounting	6	6.6	16	8.0
Industry (or Government) Economists	5	5.5	24	11.9
Professors of Business or Finance	5	5.5	25	12.4
Financial Analysts	3	3.3	9	4.5
Non-CPAs, Practicing Accountants	0	0	11	5.5
Others	1	1.1	5	2.5

The type of case for which an attorney used expert financial witnesses would seem to imply the profession of the witness selected by the attorney. However, the individual attorney did not perceive this distinction in his answers to the queries on the types of cases and kinds of experts.

Locating expert financial witnesses was primarily accomplished through communications with other attorneys. Table 4 shows the relative frequency of the responses to how the attorneys found expert witnesses.

Table 4
HOW ATTORNEYS LOCATE EXPERTS IN FINANCIAL AREAS

	Frequency	Percent
Social Connections	13	9.3
Professional Organizations	26	18.6
Colleges or Universities	38	27.1
Other Attorneys	56	40.0
Other	7	5.0

One of the final questions dealt with the expected charge for the services of an expert witness. Eighty-two (82.0) percent of the respondents indicated they expected the expert witness to charge by the hour rather than a fixed amount. Expected rates ranged from $20 per hour to $100 per hour, with the average at $40-$45 per hour.

Limitations

Although the response rate to this survey was relatively high, the implications must be viewed in the proper perspective. A statistical test for non-response bias indicated that non-respondents probably did not use expert financial witnesses. Thus, the number of attorneys using expert financial witnesses may be significantly different (probably lower) than the percentage shown in this survey.

Additionally, this survey was sent only to members of the Tennessee Trial Lawyers Association and of the Tennessee Defense Lawyers Association. In attempting to contact specifically the attorneys likely to use expert financial witnesses, many other attorneys were omitted. However, a survey of the Tennessee Bar Association would likely have reached a great number of lawyers who have had no need for the services of financial experts.

Conclusions

One of the anticipated results was that expert financial witnesses would be used less frequently on behalf of the defendant than of the plaintiff. The survey results were in basic agreement with this statement. A number of reasons could account for this situation: defendants' cases may be so weak that an expert witness cannot be found to support the defense contentions; or, any expert would arrive at the same conclusion based on the facts of the case.

Fortunately, one factor was discounted by this study. Members of the Defense Lawyers Association were no less likely to use expert financial witnesses than members of the Trial Lawyers Association. Thus, if expert financial witnesses are not used in the defense of a case, the attorney's lack of knowledge about expert financial witnesses does not appear to be a factor. The members of the legal profession who practice in the courtroom are informed about the possibility of expert financial testi-

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BANK DEREGULATION OR REREGULATION?

*Wayne Pyeatt**

After a half-century during which the nation's bankers concerned themselves with the growth of the liability side of their ledgers, deregulation has suddenly focused their attention upon the asset side. With few exceptions, deposit accounts in banks may earn any amount of interest for any period of time the bank deems appropriate.

The objectives of such deregulation appear to be at least twofold. The small depositor, at least in theory, may earn the same rate of interest on his comparatively few dollars as the one who is able to plunk down $100,000. Deregulation is also an attempt to further "level the playing field," which refers to the fact that many financial services companies compete with each other for the corporate or consumer dollar but operate under somewhat different laws and regulations. Managements of larger banks have long urged that those laws and regulations which have penalized banks be changed so that the "playing field" will be level and fair to all. There is little doubt that deregulation will, in fact, accomplish to some degree each of the objectives; however, very real questions are raised about the players on the "playing field."

There has been little real concern about the management of the more than 14,000 banks in this country for many, many years. With government regulators telling banks what interest they could pay on what kind of deposits and at the same time regulating the types, amounts, and total loan and investment portfolios, much of the management risk was removed. Any manager who did not closely follow the rules was chastised and perhaps removed from the banking scene. Few banks failed between 1940 and 1980—so few that the failure of any bank, no matter how small, was likely to make national news.

Then came the seventies with high interest rates, double-digit inflation, and the gradual relaxation of government regulation. This period also brought record applications for the formation of bank holding companies, which rather quickly moved toward the entrance into non-banking fields, an action intended to partially level the "playing field." Bank stocks, never very popular or widely traded, were listed on stock exchanges; and the race for industry control, market share, and profits was on. Since October 1, 1983, when the great majority of interest regulation was removed, the race course has had no fences.

Deregulation is supposed to bring more profits and/or greater market share to the aggressive, creative bank, which it surely may do. It also, for the first time in a couple of generations, gives all banks "the right to fail," as stated by one bank examiner.

Those who are steeped in the concept that pure competition is the answer to problems within the industry look forward to the race. Some, however, are having second thoughts about their new-found freedom to (1) be able to attract deposits almost overnight by paying well above market rates and (2) enter fields long barred to bankers, particularly those having to do with common stocks and real estate development. Underwriting of revenue bonds and insurance is not yet approved, but great pressure is being placed on Congress by bankers for such approval. Certainly, banks are now able to structure loan portfolios to include those that would have been suspect 20 years ago.

Banks do have the right to fail, and even the most avid supporters of deregulation agree that many will fail. Perhaps there are far too many banks in this country. Fourteen thousand is a very large number, particularly when most countries in the free world have perhaps fewer than 50. The problem, of course, is *which banks* are going to fail. It is one thing for a small bank in Tennessee to close its doors, usually reopening the next day after a change of name. It is quite another thing to consider the failure of a major city bank with billions of dollars of deposits at risk. Yet each one of these banks is counted as one of the 14,000.

It appears that the financial community in general and banks in particular are beginning the race, and the race is not likely to stop very soon. There are very good reasons why the race should not cease; however, it is possible that the pace may slow considerably.

There is a major problem confronting banks, government, and, if not addressed rather quickly, citizens. At this time, all banks, large and small, rural and urban, well or poorly managed, have precisely the same deposit insurance coverage and, in fact, pay the same premium for such coverage. This means that an inept or unprincipled manager may, almost overnight, attract exceptionally large deposit increases simply by paying a better interest rate. He then may invest in high yielding, very risky loans or securities in order to get the interest rate spread he must have to remain profitable. Actions of this sort can occur very rapidly before any regulatory agency learns of or can act to prevent or to counter such moves. It would seem that

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such an opportunity would be perfectly suited to the interest of organized crime. Just the ability to attract millions of dollars overnight seems, perhaps, to be inherently dangerous. Yet the FDIC insures those depositors exactly the same and for the same price as those in a competing bank in the same town, a bank which runs its affairs in a reasonable fashion.

The problem is complex. First, how badly hurt is the well-run bank going to be during the time its competition is taking its deposits? Can the bank survive the loss of a substantial part of its deposits even for a limited time? Or, will the bank be forced to meet its competitors' rates? Competition is the life blood of capitalism, but one must remember the ramifications of this kind of unbridled competition. It has many more far reaching effects than a sale on tires.

Second, considering the creative treatment of the ownership of the $100,000 accounts, how much money could one family have in one bank and be assured of deposit insurance coverage? We know that a husband and wife can have accounts insured for $200,000 by using separate accounts. Could it be $400,000? Some believe so. When children are involved, the total per family is certainly several times the $100,000 FDIC limit. Why is that important? It means that money in substantial amounts will follow the highest rate without fear of loss.

Third, the use of money brokers has compounded the problem. Brokers are not concerned about bank safety and stability so long as deposit insurance is in force. They simply limit all deposits for their customers to $100,000 or less per bank. Pension funds may place millions of dollars in such accounts in a single bank without concern for insurance limits, a fact not well known. So long as the name of the potential pensioner is furnished, each account within the fund is insured up to $100,000 in a *single bank*. Those funds involving thousands of accounts could conceivably deposit several million dollars in a single small bank, which at the time of deposit could be on the brink of failure, yet such deposits would be fully insured. J. Charles Partee, member of the Board of Governors of the Federal Reserve System speaking before the House of Representatives Subcommittee on Financial Institutions, Supervision and Regulation, and Insurance on October 27, 1983, addressed the problem. Speaking of deposit brokering, he agreed that some basic problems exist—ones that could undermine market discipline associated with risk, therefore increasing potential calls on the funds of deposit insurance agencies. He suggested registration and regulation of money brokers, but he recognized the possibility of substantial problems in the event of the use of brokered deposits by troubled institutions (perhaps referring to the recent failure of the First National Bank of Midland, Texas). Apparently that bank failed less due to bad loans, although there were many, than to a liquidity crisis. This crisis occurred due to a liquidity insolvency brought on by the borrowing of nearly $500,000,000 from other banks or from deposits brokered through Merrill Lynch. When problems surfaced in September 1982, depositors began a quiet run on the bank. From the end of 1982 until it closed in early October 1983, the bank had deposit outflows of $813,000,000. Governor Partee suggests the problem will be solved by the requirement in effect since September 30, 1983, that all banks report quarterly the volume of deposits obtained through brokers. Whether such reports would be made in time for proper action on the part of the regulatory authorities may be open to question.

These concerns are real and are facing the industry now. There have appeared recently certain rumblings in Washington. The various supervisory agencies express apprehension with regard to money brokers. The FDIC is less than happy about its present inability to have authority when decisions are made concerning the entrance of banks and holding companies into non-banking fields. Recent comments by Allan Greenspan indicate the feeling that FDIC and FSLIC insurance as presently structured provides subsidies to the banks and thrifts and, in reality, gives them the right to issue government-guaranteed paper in essentially unlimited amounts. Paul Volker, Chairman of the Board of Governors of the Federal Reserve System, has made clear his support for action that would declare a moratorium on all further deregulation of access by others into the traditional banking field and, of course, the further access of banks into non-bank related areas. In a statement before the Senate Committee on Banking, Housing, and Urban Affairs on September 13, 1983, he indicated his concern about the need to maintain confidence in the basic payments system and the need for continuing attention to the safety and soundness of banks. He said, ". . . when soundness, confidence, and continuity in the provision of money and payments services are at stake, deregulaton alone cannot achieve the objectives because some degree of government regulation is implicit. The creation of the Federal Reserve and the FDIC and, more recently, our shared concern about the need for more intensified supervision of international banking are obvious cases in point." Later, in the same speech, he referred to the unique role performed by depository institutions and the concern felt by government as a lender of last resort (the Federal Reserve and the Federal Home Loan Bank) and as an insurer of deposits. He also questioned whether a depository institution can be wholly insulated from the fortunes of its affiliates.

Dr. Murray Weidenbaum, former chairman of the Council of Economic Advisors, when questioned about bank deregulation and the future during a recent visit to Memphis State University, said, "I much prefer to speak of regulatory reform."

The concern is not yet broad nor deep. The general public is not well informed and does not understand that inattention will finally add further burdens to them in the long run. On the other hand, many bankers are realizing that if deregulation continues as planned they may be forced to face (1) public scrutiny of their loan and investment portfolios, a measure supported by Chairman William Isaac of the FDIC (*Wall Street Journal*, p. 34, December 8, 1982); (2) sharp increases in capital funds and reserve requirements required by supervisory authorities; over seven billion dollars in new capital had been raised by banks alone by late October 1983; (3) a major change in the way the FDIC insures accounts for individuals and/or the cost of the insurance to the individual banks.

It is possible that "deregulation" has become "regulatory reform" and is on its way to "reregulation."

(Continued from page 17)

mony, and the use of an expert witness is not related to the tendency of the lawyer to represent either plaintiffs or defendants.

An important area of concern to the legal community did become apparent in the statistical analysis of the questionnaire survey. No clearcut distinction appeared between the types of cases in which an attorney would use an expert financial witness and the kinds of witnesses that the attorney was likely to select. In general, a match occurred between the legal cases and the experts employed. However, on an individual basis, no such link was found. Within the financial community the lines of differentiation among the professions are well drawn. The lawyers surveyed did not seem to perceive these distinctions among the qualifications of the various experts.

This study indicated the need for liaison between the financial world (particularly accountants and economists) and the legal community. Initially, attorneys need some background on the various financial occupations and the differences among the financial experts.

Lawyers must also be informed about possible sources for finding the expert and how to use that expert most efficiently. Apparently many attorneys are ignoring (or using inappropriately) a relatively inexpensive device to help prepare and try even the most mundane cases.

REFERENCES

Bellew, Patricia. "Corporations Regard Business Professors as Good Investments." *Lexington Herald-Leader*, September 6, 1981, B8.

Benkin, Isaac D. "Is It Bigger Than a Breadbox?—An Administrative Law Judge Looks at Cross-Examination of Experts." *Air Force Law Review*, 21:364-375, 1979.

Drossman, Ken R. "Accounting Firms' Services to Lawyers." *American Bar Association Journal*, 68: 1392-1396, November, 1982.

Finfrock, Wallace P., and Bobby C. Spradlin. "How to Organize and Present Statistical Evidence." *The Practical Lawyer*, 24:67-76, June, 1979.

"Economist's Testimony Program Transcript." *Insurance Counsel Journal*, July, 1976, 392-408.

Meckler, Milton. "Complex Litigation: Effective Use of the Technical Expert." *Trial*, 16:37-39, August, 1980.

Stotsenberg, Harry. "Advice to Lawyer on Using the CPA in Litigation." *Orange County Bar Journal*, 7:52-55, Summer, 1980.

Wright, Howard W. "Forensic Accounting - It's Debatable." *Financial Executive*, 45:16-22, February, 1977.

Wright, Howard W. "How to Be An Expert Witness." *The Practical Accountant*, May/June, 1978, 73-80.

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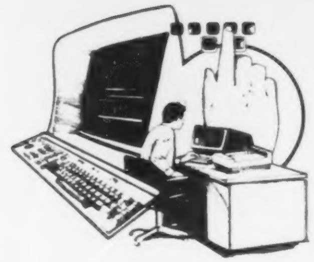

by Peter L. McMickle, Ph.D., C.P.A.

COMPUTERIZED TAX BENEFITS

Uncle Sam can help defray the cost of a personal computer through income tax benefits. These benefits are in the form of reduced taxes through tax credits and deductions. However, determining the eligibility and exact amount of this help is somewhat complicated.

Eligibility

In order for the costs of a personal computer and related equipment and supplies to be qualified for tax benefits, the purchase must be wholly or in-part:

(1) A business related expense,
(2) A tax preparation expense, or
(3) An eligible education expense.

The computer purchase may actually be a combination of several of these deductible categories plus other non-deductible personal costs.

Business Expenses

Business expenses are expenses incurred in connection with earning or, in some cases, attempting to earn taxable income from a trade, business, or income-producing activity. Business expenses can be incurred by *both* owners and employees. The expense may be currently deductible or depreciable over time and may also be eligible for an investment tax credit.

The IRS will be concerned with how much of the computer cost is actually business or job-related. For example, a taxpayer might use his personal computer for:

(1) Report writing	25%
(2) Analyses	20%
(3) Personal budgeting	10%
(4) Self improvement	15%
(5) Entertainment	10%
(6) Daughter's homework	20%

If the report writing and analyses were job-related, then 45% (25% + 20%) of his computer costs would be eligible for tax benefits. The remaining 55% would not be eligible.

If he also used his computer in a part-time business capacity or for investment analysis, those portions of the costs would also be eligible for tax benefits. However, these benefits would apply only if the undertaking was truly for profit. The IRS applies a rule of thumb that a business must earn a profit in at least two out of every five years to avoid consideration as a hobby business. Expenses incurred from a hobby are deductible only up to the amount of any related revenue.

Tax Preparation Expenses

A personal computer might also be used to assist in income tax preparation. It could even assist in defense of a tax audit. All such tax-related expenses are deductible, including a portion of the original cost of the computer and any tax-related software and supplies.

Eligible Education Expenses

The deduction for educational-related expenses is quite restrictive. Basically, educational costs which aid an individual in his *current* occupation are deductible, but costs which prepare him for a *new* occupation are not. Thus, the ordinary education costs for obtaining the first job are not deductible nor are the educational costs associated with job advancement. For example, a taxpayer can usually deduct continuing education costs, including related computer costs. However, any educational costs associated with a change of profession or discipline, such as from Psychology to Computer Science, would generally not be deductible.

How Much is Eligible

Ideally, 100% of all related computer costs will be eligible for tax benefits. From a practical standpoint, such a claim will stand up only if the computer is used exclusively for eligible activities and if this can be proven by documentation, such as a computer time log. A computer used exclusively at work would be easier to justify for tax benefit purposes than would be one used at home. In any case, the taxpayer should be prepared to support with proof a claim of high eligibility.

Calculating the Tax Benefit

The three basic tax benefits that can apply to computer-related purchases are:

(1) Expense deductions,
(2) Depreciation deductions, and
(3) Investment tax credits.

The last couple of "Tax Simplification Acts" have made tax return preparation more complicated than ever before. Now the three basic benefits are interrelated, and if you take one, you may not be able to take some or all of another. Also, exactly where these items are listed on a tax return varies with the nature of the expenditure and the employment status of the taxpayer.

Expense Deductions

A taxpayer can currently deduct those eligible expenditures that are actually consumed in the tax year. Computer-related costs that could be fully deducted in the year of purchase include:

(1) Dues to computer organizations
(2) Subscriptions to computer periodicals
(3) Equipment covers
(4) Information utility fees
(5) Floppy disks
(6) Related telephone expenses
(7) Related power costs
(8) Equipment insurance
(9) Repair costs
(10) Books useful for a year or less
(11) Business software useful for a year or less
(12) Any related expenditure of short-term benefit

If the computer is set up in a room in the home used exclusively on a regular basis as a principal place of business, related household expenses and depreciation on the house may also be deductible. University personnel would normally qualify for home office deductions only if they had a secondary business activity operated out of their home and met other tests.

For items that will be used for a number of years, there are two options: expense currently or depreciate over time.

Expensing Option

Computer-related purchases subject to expensing and/or depreciation are those items with a useful life of over a year. These include:

(1) Computer
(2) Disk drives
(3) Printer
(4) Cables
(5) Modem
(6) Stand
(7) Business software
(8) Books and manuals
(9) Any expenditure of long-term benefit

Starting in 1982, taxpayers could deduct expenditures for three-year and five-year property up to a stated maximum. The amount of this maxmum deduction is:

1982	$5,000
1983	$5,000
1984	$7,500
1985	$7,500
1986 on	$10,000

The disadvantage of this option is the entire loss of any related investment tax credit on the amounts expensed. Purchases that exceed the amount of the expense deduction would still be eligible for an investment credit and depreciation deduction as described below.

Depreciation Deduction

If the expensing option is not chosen or if a portion of the purchase exceeds the expensing option maximum, qualified expenditures that apply to more than one tax year can be "depreciated." Since the expensing option is limited to between $5,000 to $10,000 depending on the tax year, any long-term expenditures over this maximum would have to be depreciated in order to be deductible.

Two choices have to be made concerning depreciation of computer-related items:

(1) Three-year vs. five-year property
(2) Accelerated vs. straight-line depreciation

Three-year vs. Five-year Property

Normally, computer purchases of hardware, software, and related equipment are classified by law as five-year personal property. However, a computer purchase may be classified as three-year property if it is used for "research and experimentation." The IRS interprets this in the strict experimental or laboratory sense. "Literary, historical, or similar projects" would not qualify for the three-year property classification.

The three-year classification will result in earlier deductions. However, if an individual expects his marginal tax bracket to rise significantly in the fourth and fifth year of the purchase, then it might be more advantageous to choose the five-year option. Also, classification as three-year property reduces the applicable investment credit from 10% to 6%.

Choice of Depreciation Methods

The ACRS accelerated depreciation method will result in a faster write-off than straight-line and normally would be the best choice. If an individual expected his marginal tax bracket to rise significantly in future years, then straight-line might be a better choice. For three-year property, a straight-line life of 3, 5, or 12 years can be chosen. For five-year property, 5, 12, or 25 years may be used. In a given year, the same method must be used for all property of the same class life placed in service that year.

Investment Tax Credit

An investment tax credit is available in the year of purchase for new or used tangible personal property (and other Section 38 property) acquired for use in a trade or business or other income producing activity. The amount of the credit is 10% on five-year property, 6% on three-year property. (The credit is limited to the first $25,000 of tax liability and 85% of the excess, so an upper bracket taxpayer can't zero out his tax with investment credits.) It's hard to lose the credit since it may be carried back to the three prior years and forward fifteen years. Only $125,000 of the cost of used property is eligible for the credit. In general, any computer-related purchase that is subject to depreciation as three-year or five-year property is eligible for the credit.

However, the regular investment tax credit is available only to those taxpayers whose investment in depreciable property is "at risk." Amounts are *not* considered at risk if:

(1) The taxpayer is protected against the loss of the invested amount,
(2) The amount was borrowed and the taxpayer is not *personally* liable for the repayment of the debt, or
(3) The lender is a related creditor.

A related creditor is one who holds a 10% or greater ownership interest in the taxpayer's business or who is (or is related to) a seller or promoter of the taxpayer's interest in the property, except that a government agency is not a related creditor.

Borrowed amounts will be considered at risk if the taxpayer at all times has at least a 20% interest in the basis of the property that is at risk and the borrowed funds are provided by an unrelated financial institution, unrelated third-party lender, or a government agency.

The investment credit also reduces the basis for any depreciation by half the amount of the credit. In other words, you can't depreciate all of the credit—only half. As an alternative to reducing the depreciable basis by 50% of the ITC, a taxpayer may elect to reduce the regular investment tax credit by 2%. Thus, three-year property would have a 4% ITC and five-year property would be 8%. Normally this option would only benefit the upper bracket taxpayer who is not entitled to claim all of his available regular investment tax credit.

Choosing the Best Combination of Expensing, Depreciation, and Investment Credit

The best choice of tax benefit method is a function of a taxpayer's marginal tax brackets in the years involved combined with the time value of money. This involves equating tax savings with time, benefit, interest rates, and tax brackets. Five variables are difficult to illustrate in a two-dimensional graphical format, and there are a large number of possible combinations. Generally speaking, below the 40% marginal tax bracket, a five-year life, ACRS-accelerated depreciation method combined with a 10% investment tax credit yields the greatest present value.

In a high tax bracket, expensing is just about equal or sometimes better than the other methods and is certainly simpler to handle on the return. Beyond the maximum expensing limit ($5,000 in 1983, $10,000 in 1986) the best choice is three-year accelerated depreciation coupled with a 6% investment tax credit.

Additional Observations

The computer purchase can generate tax benefits if the taxpayer *itemizes* his deductions or has an income from a business, profession, or investment.

Employees whose total itemized deductions are less than their zero-bracket amount will lose most of the tax benefits discussed in this article. However, the investment tax credit would still be available to them even if they didn't itemize.

An item that is resold or traded-in before the end of its class life would be subject to recapture of some or all of the investment credit. This means that an individual might have to pay back the credit if he didn't hold on to the property. He would also owe tax on any gain realized from the sale, and that gain would be taxed at ordinary rates to the extent of any depreciation taken.

Some individuals might have to watch out for being classified as dealers. Stock-in-trade is not eligible for depreciation and investment credit. Also, for business expenses to be deductible they must be "ordinary and necessary." There is the possibility that the IRS might claim that a person spent too extravagantly (i.e., greater than "necessary"). However, this claim is unlikely to occur with computer-related expenditures.

Final Recommendations

While it is difficult to generalize in this area, most readers will want generalization. A typical purchaser with a fairly stable tax bracket would probably fare best with the following strategy:

(1) Develop documentation to support the contention that the computer is principally used for qualified purposes.
(2) Identify and make certain that all eligible deductions are taken.
(3) Deduct currently all expenditures with less than a one year useful life.
(4) In the below 40% marginal tax bracket:
    (a) Choose the five-year life on all long-term computer purchases.
    (b) Take the investment tax credit of 10%.
    (c) Depreciate over a five-year period using ACRS accelerated depreciation—remembering to first

reduce the depreciable basis by the amount of the ITC.

(5) In the above 40% marginal tax bracket:
  (a) Expense all long-term computer purchases up to the per-year maximum allowable ($5,000 in 1983).
  (b) For any excess expenditures choose a three-year life if it can be justified, otherwise pick five-year.
  (c) Take the investment tax credit (6% or 10% depending on asset life).
  (d) Depreciate over the appropriate life using ACRS accelerated depreciation—remembering to first reduce the depreciable bases by the amount of the ITC.

With proper strategy, Uncle Sam will pay back 20% to 40% of the costs of a computer.

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POPULATION CHANGES IN TENNESSEE, 1970-1980

*H. Ronald Moser and Kenneth W. Hollman**

The *1980 Census of Population* contains a wealth of data concerning the size, characteristics, and distribution of Tennessee's population. These data have numerous uses and applications. They are useful to state planners, educators, businessmen, and others in identifying and dealing with problems which they face. A study of population shifts and changes is important for understanding the need for schools, roads, parks, and other social services; the nature of the state's labor market; and the dynamics of the state's economy. The data also have implications for those in the private sector. They enable the businessman who wishes to stay ahead of his competitors to spot demographic trends as they develop, to track them over time, to analyze their implications, and to capitalize on them as quickly as possible.

The purpose of this article is to extend the audience for 1980 census data for Tennessee and to provide some elementary analysis of the results. Population changes are examined at the state level as well as at smaller political subdivision levels. Comparisons are drawn at various points between population changes in Tennessee and those at the national and regional levels.

Total Population

The 1980 census count showed that Tennessee has a total population of 4,591,120.[1] This figure represents a growth of 665,102 people or 16.9 percent from the 1970 population of 3,926,018. Tennessee's growth rate during the decade was almost 50.0 percent higher than the comparable national growth rate of 11.4 percent. Only 19 of the 50 states experienced a larger percentage increase than did Tennessee. Tennessee ranked seventeenth among the states in total population size in 1980, the same in 1970, and accounted for 2.9 percent of the country's population growth during the decade.

Not only did Tennessee's population grow faster than that of the nation, it also grew faster than the population in many neighboring states. As a group, the 11 southern states experienced a population increase of 22.4 percent during the decade of the 1970s. Every state in the region shared in this increase, with Tennessee being the median state in terms of population growth. Each of the southern states recorded a percentage increase greater than the national average. Table 1 shows the 1970 and 1980 population figures for the southern states.

Table 1
POPULATION INCREASE OF ELEVEN SOUTHERN STATES, 1970-1980

	Population		Percent
State	1970	1980	Change
Florida	6,791,418	9,746,324	43.5
Texas	11,198,655	14,229,191	27.1
South Carolina	2,590,713	3,121,820	20.5
Georgia	4,587,930	5,463,105	19.1
Arkansas	1,923,322	2,286,435	18.9
Tennessee	3,926,018	4,591,120	16.9
North Carolina	5,084,411	5,881,766	15.7
Louisiana	3,644,637	4,205,900	15.4
Virginia	4,651,448	5,346,818	14.9
Mississippi	2,216,994	2,520,638	13.7
Alabama	3,444,354	3,893,888	13.1
Total	50,059,900	61,287,005	22.4

Source: U.S. Department of Commerce, Bureau of Census, *1980 Census of Population*, Volume 1, *Characteristics of the Population*, Chapter A, "Number of Inhabitants." There is a separate publication for each of the eleven states, published between January and April 1982.

Another significant fact is that the population in Tennessee is increasing at an accelerating rate. The state's population growth rate was only 8.4 percent in the 1950s, but it rose slightly to 10.1 percent in the 1960s before climbing to 16.9 percent in the 1970s. There are slightly more than twice as many Tennesseans today as in 1910, but if the growth rate of the 1970s continues, the state's population will double again by 2030. This rapid growth rate raises many questions about the state's ability to provide necessary jobs and adequate social services to sustain its growing number of human members.

County Growth

Every year thousands of Tennesseans make the momentous decision to move to a new abode. Sometimes the relocation involves emigration to another country or to another state in the U.S. More often, however, it is a movement across town or to another city or county in the state.

Primarily because of this human ebb and flow, population growth is rarely uniform across areas and regions. In the analysis below, data will be examined to show exactly where population growth occurred by county in Tennessee in the 1970s. The data will then be disaggregated further

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to point out significant areas of population growth by place, city, and metropolitan area. A later section will identify factors which appear to be associated with changes in population. For comparative and analytical purposes, counties will be grouped by the three traditional grand divisions—Eastern, Middle, and Western. This grouping provides the basis for a more systematic study of population trends and lends a regional dimension to the study.

As mentioned above, the state's population grew by 16.9 percent during the last decade. Population change in individual counties ranged from stunning growth amounting to 68.8 percent in Williamson County and 63.8 percent in Cheatham County to a decline of 7.7 percent in Lake County. Lake County, in the extreme western part of the state, was the only county which recorded a decrease in population during the last decade. Sixty-one counties grew faster on a proportionate basis than the state as a whole, while 34 counties grew by less than the state average. Table 3 at the end of this article shows the population changes in Tennessee from 1970 to 1980 for each of the state's 95 counties.

The most populous county in Tennessee in 1980 was Shelby (Memphis). The population buildup in this area is due to the fact that Memphis is a wholesaling and processing center for soybeans, cotton, and other crops that grow on both sides of the Mississippi River; the site of a large health services complex; home to a large airport that serves a large part of the Mid-South region; the site of a major university; and the headquarters for a number of very large corporations. The second, third, and fourth most populous counties in 1980 were Davidson (Nashville), Knox (Knoxville), and Hamilton (Chattanooga) counties, respectively. This rank order did not change from 1970 to 1980.

Shelby County also gained a larger number of people than any other county over the decade. The 1980 census count showed Shelby County with 55,002 more residents than it had in 1970. In addition to Shelby, there were seven other counties which recorded population gains of over 20,000 people. They were Knox with 43,401; Hamilton with 32,663; Davidson with 29,934; Sumner with 29,524; Rutherford with 24,630; Williamson with 23,685; and Montgomery with 20,621. All of these counties either included or were adjacent to metropolitan and/or large urban areas which offer greater economic opportunities as well as social advantages which are conducive to population buildup. This explains why counties containing such population nodes experienced a greater likelihood of growth in the 1970s.

Size of county was positively related to population growth in Tennessee in the 1970s. Absolute growth was clearly greatest in the more populous counties, although the largest counties experienced relatively slow growth. For example, neither of the four largest counties grew as rapidly on a relative basis as the state as a whole. However, these four counties had larger numbers of people added during the 1970s than did any of the other 91 counties. The correlation between county size and growth extends to other counties as well. Of the 10 counties in Tennessee with the largest absolute increases in population over the decade, only two (Williamson and Wilson counties) had a population of less than 50,000 in 1970.

Population growth was not equally distributed among the grand divisions of the state. The division experiencing the greatest population growth was the Middle division with a 21.3 percent increase. The Eastern division was second with a 19.1 percent increase, slightly above the state-wide growth rate of 16.9 percent and well above the national growth rate of 11.4 percent. The Western division grew by only 9.8 percent during the decade. These proportional differences serve as a reminder that individual regions may perform substantially better or worse than the entire state, and that simple generalizations about population growth for a state as diverse as Tennessee should be avoided.

Analysis of census data reveals—as might be expected—that population growth measurements for a single grand division are often not representative of all its counties. For instance, several counties or areas of population concentration grew much faster in the 1970s than did the division of which they are a part. This was particularly evident in Middle Tennessee, where 10 counties of this division's 41 counties grew by more than 30.0 percent during the decade, while only two counties grew by less than 10.0 percent.

The population buildup around Nashville helps explain the large number of counties experiencing growth in Middle Tennessee. Five suburban counties in the Nashville SMSA were among the top 10 counties in the state in terms of relative numbers of people added in the 1970s. Four of these counties experienced growth rates of over 50.0 percent during the decade. The centrality associated with Nashville—the city is a transportation and commercial hub, industrial nexus, seat of state government, home of powerful financial institutions, and the site of numerous small business enterprises—has enabled it to dominate and overwhelm the smaller towns and cities in the hinterland. The rapid growth of the Nashville metropolitan area raises many questions about the urban sprawl over Davidson County and the contiguous counties and the mushrooming subdivisions throughout the area.

The Eastern division grew less rapidly than the Middle division, but it also showed widely differing growth among counties. Seven counties of East Tennessee experienced population growth of over 30.0 percent, led by Sevier, Meigs, and Rhea counties, and two counties recorded a growth rate of less than 10.0 percent. As noted above, the Western division registered a growth rate significantly below the state and national averages in the 1970s. Neither of the 21 counties in West Tennessee recorded a gain in population of over 30.0 percent, while eight counties registered growth of less than 10.0 percent. Shelby County, and to a lesser degree Madison County (Jackson), accounted for much of the population increase in this division. The counties contiguous to Shelby County did not experience the sharp population surge in the 1970s which those adjacent to Nashville enjoyed. One reason is that the primary beneficiaries of the population spillover from the Memphis metropolitan area were neighboring counties in North Mississippi.

City Growth

Of course, Tennessee's population is not evenly distributed over the state. Many counties are highly rural and do not contain a city, but every county has at least one place that serves as a trading center and seat of government. On the other hand, even the most densely populated counties contain some relatively empty area.

An examination of census figures with respect to the change in the size of population centers sheds significant light on population flows from 1970 to 1980. For purposes of analyzing the differential rate of growth in communities and places of different sizes, cities and towns have been grouped by density in Table 2. The table shows that Tennessee had 138 places with 2,500 or more inhabitants in 1980, as compared to only 105 a decade earlier. This represents a 31.4 percent increase during the period from 1970 to 1980. These places, many of which are county seats, are located throughout the state, but the larger ones are concentrated in the Eastern and Middle divisions of the state.

Table 2
POPULATION CHANGE FOR TENNESSEE
CITIES, 1970-1980

	1970		1980	
City Size	Number of Cities	Total Population	Number of Cities	Total Population
Under 1,000	142	71,159	128	66,387
1,000-2,499	80	126,314	113	179,390
2,500-4,999	42	148,850	58	203,500
5,000-9,999	31	215,117	39	276,316
10,000-24,999	22	329,431	28	406,925
25,000-49,999	6	192,102	8	260,766
50,000-99,999	0	0	1	54,777
100,000 and over	4	1,353,336	4	1,436,927
Total	327	2,436,309	379	2,884,988

Table 2 indicates that the largest absolute population increase was recorded during the 1970s in those four cities with populations of 100,000 and over. Only one size class—the under 1,000 category—showed a decrease in either number of cities or population. There was a greater tendency for gains than for losses in every other size class. Moreover, the total population increase in all of the cities with under 100,000 population was greater than the total for cities with 100,000 and over, even though cities with 100,000 and over population contained a larger number of people. The nation-wide population shift from large metropolitan areas to small towns and rural areas is quite apparent in Tennessee.

There is, of course, no guarantee that current county and city growth patterns in Tennessee will continue. However, the plausible association of these increases with economic and natural resource development suggests that the major trends will continue. Moreover, if the past is any indicator of the future, new dynamics of population growth will likely occur that will help restructure Tennessee's society and call into question current population forecasts and economic projections.

Rural vs. Urban Trends

People all over the world are moving from farms and rural areas to urban areas, or trying to move. This is as true in Tennessee as elsewhere. While the phenomenal rush to urbanize seems to have abated somewhat, partially because of the stresses that are imposed on people who move to urban areas, the trend is still real enough to warrant serious study.

When Tennessee's population changes are examined in a rural-urban context, an interesting array of facts is revealed. The state's population was 60.4 percent urban in nature in 1980 as compared with 59.1 percent in 1970. The 1980 census classification of the population reflects a 19.6 percent increase in urban population from 1970 to 1980. In contrast, the rural population increased by only 13.2 percent over the same period. Therefore, the human migration stream to the state's cities continues, albeit more slowly, as it has since statehood. Tennessee is primarily an urban state, but ruralization is still quite prevalent.

Census data show that there were sharp variations in the urban and rural population increases between different regions of the state. Each of the three grand divisions experienced an increase in *rural* population between 1970 and 1980. The highest rate of rural population growth occurred in the Middle Tennessee division (22.2 percent), where only 4 of the 41 counties showed a decrease in this population component for the decade. The Eastern division experienced a 9.6 percent rural population increase, with five counties showing declines, and the Western division had a 7.2 percent increase, also with five counties recording a decrease in rural population. In terms of absolute increase, the Middle division experienced the largest gain in rural population between 1970 and 1980 (116,179).

There were also sharp regional variations in *urban* growth rates. The Eastern division led easily with a growth rate of 28.6 percent for the decade. Only two counties in this division recorded a decrease in their urban population. They were Anderson (-2.0 percent) and Hamblen (-3.1 percent). There were seven counties in the Eastern division with some urban population in 1970 that had increases of over 50.0 percent in this population category for the 10-year period. One reason for the large number of counties experiencing growth in East Tennessee is the large number of small- to medium-size towns in that division. While there were only 110 incorporated places in the Western division and 123 in the Middle division, there were 146 such places in the Eastern division. Many of these places are the site of small manufacturing firms—particularly such labor-intensive industries as textiles and synthetic fibers, though many of the newer manufacturing firms produce components and subassemblies for more complex products in growth industries—and are located in counties from Chattanooga to the Tri-Cities area. These places also often serve as residences for workers who commute to a larger central city—such as Knoxville, Chattanooga, or Johnson City—and they oftentimes attract activities away from the larger center by providing a more attractive and economical domiciliary site (lower taxes, lower rents, attractive land values, etc.). Finally, the amenities available in the area for retirees—good fishing, nearby universities, beautiful scenery, and pleasant weather—help account for the population growth in the Eastern division.

The Middle division recorded an urban population increase of 20.5 percent from 1970 to 1980. Four counties in this division with some urban population in 1970—all in the Nashville SMSA—had an urban growth rate of over 50.0 percent during the decade. Only one Middle division county lost urban population in the 1970s. The Western division had a 10.9 percent increase in urban population from 1970 to 1980. None of the counties in this division recorded an increase in urban population of 50.0 percent or more, and 3 of the 21 counties that comprise this grand division lost in urban population for the 10-year period.

Each of the grand divisions recorded large absolute increases in urban population during the 1970s. The Eastern division led again with an absolute increase of 214,389 persons. The Middle division was second with 148,676 persons, and the sparsely populated Western division—dominated heavily by growth of the Memphis SMSA—recorded 92,050 persons. This clustering of population in Tennessee's urban areas, which often can provide residents with significant economic and social advantages, will help dictate the path of economic development which the state chooses to take. It will also influence the capacity of local institutions to anticipate and adapt to changes in the size and composition of their population and to generate goods and services which the state's increasingly affluent populace will likely expect.

While the above figures may suggest that Tennessee is becoming more urbanized, it seems clear that rural areas constitute a proportion of the total population so large, in both absolute and relative terms, that it can hardly be ignored. The 1,817,547 rural residents in Tennessee must be taken into consideration in any study of the state's population and in any planned attempt at influencing future population trends in the state. The future of rural areas in Tennessee does not appear to be one of imminent decline.

Economic and Marketing Observations

It was implied in the beginning of this article that population growth and movement bear a cause-and-effect relationship to economic and social change. Economic and demographic growth are interdependent. The opportunity for jobs, differences in income, the level of business activity, and stability in the agricultural sector are all reflected in these complex linkages. While no attempt will be made in this article to specifically identify nor to evaluate all the factors that propel population growth—the data are insufficient to pinpoint and measure the magnitude and relative importance of many of these ties—a number of comments will be made concerning how the trends in population growth during the last decade relate to trends in other demographic and economic variables. Since only limited statistical testing has been utilized in this regard, the validity of some of the apparent relationships may be open to question.

As already noted, Lake County was the only county in Tennessee that lost population during the 1970s. One explanation for this county's population decline is that it had a large percentage of its land area in farms and received a much higher than average percentage of personal income from farming (based on data for 1980). Since farm income has not been sufficient to compete with rising wages in the professions and industry, many young people from this county have prepared themselves through education and training for skills in other occupations and have moved away. An analysis of the age structure in Lake County shows, as might be expected, that it has a median age higher than the state average. It has lost young people to other regions which have experienced stronger economic growth.

It is interesting to note that five of the six counties in Tennessee which experienced negative population growth or the lowest positive percentage growth from 1970-1980—Lake, Gibson, Crockett, Haywood, and Hardeman—are located in highly rural and agricultural West Tennessee. In fact, 7 of the 10 counties with the least percentage growth in the 1970s are in the Western division of the state. Migration out of state or to other counties in Tennessee where jobs are more readily available helps to account for this low growth.

It would appear that when a county has a large percentage of its land area in farming, and when that county is dependent on the farm sector for a major part of its income, there is probably less economic opportunity in that county than in other economic areas. Furthermore, the need for manpower has diminished greatly in the highly mechanized agricultural sector, a factor that has directly or indirectly adversely affected businesses in the service industries, in wholesale and retail trade, and in many other sectors of the economy. The net result is that many people have had to leave such counties and look elsewhere for jobs.

Despite loss in population by West Tennessee counties because of declining or slowly growing farm income, many counties in Tennessee with high percentages of income from agriculture and a large percentage of their land area in farming experienced population gains greater than that of the state as a whole. In most such counties, other influencing factors were easily identifiable. For instance, rapidly growing Williamson, Rutherford, Sumner, and Wilson counties in Middle Tennessee all had over 60.0 percent of their land in farming in 1980, but all four counties experienced at least a 40.0 percent increase in population for the decade of the 1970s. The obvious reason for this growth is their proximity to the Nashville SMSA which they serve as "bedroom communities." Many workers live in the referenced counties because of their inability to find homes in Nashville; lower rents, land prices, and living costs; or conducive lifestyles. Also, some people have migrated to the suburbs in these counties because of the perception that they are a good place to raise children.

Another factor which seems to be significantly related to population growth is income. Income statistics by county often provide an opportunity to assess the extent to which the patterns of change during a given period in the level of economic activity parallel population change. Despite some obvious faults as a measure of economic well being, income is the one variable that is of more interest to more people than any other. Income data by state and smaller political subdivisions are very important and useful for planning and decision making and for economic base studies and analyses. These data are particularly important in a study of population flows, because individuals often move from one county or state to another where jobs are more plentiful and where wages and salaries are higher.

There was a marked tendency for the grand division with high (low) average per capita personal incomes in the 1970s to have high (low) population growth rates during the decade from 1970-1980. The Middle division, with the highest population growth rate during the decade, also recorded the highest per capita income level. Income growth in the Middle division is partially due to the high level of economic activity in the Nashville metropolitan area. The Eastern division experienced the second highest population growth rate and also the second highest average income. Income growth of this area was particularly heavy in Anderson, Knox, and Hamilton counties. Knox and Hamilton counties are each home to a major university, which provides stable and relatively high-paying employment, and each also serves as a transportation, commercial, service, and financial center for a sizable portion of the state. The uranium-enriching facility at Oak Ridge—as well as other "high-tech" industries along the Tennessee Technology Corridor—had a favorable effect on income growth over a wide area centered in Anderson County. Income growth was also heavy in the counties containing the Tri-Cities area, where the production of chemical products (the state's second largest manufacturing sector after apparels) provides a major source of employment.

The Western division, which experienced the smallest growth rate in the 1970s, also had the lowest average income for the decade. As indicated previously, sagging farm incomes in some of the highly agricultural Western division counties help to account for the low per capita incomes in that region. The relatively high incomes in Shelby, Madison, and Obion counties were not great enough to offset the very low incomes in most of the Western division counties.

Although the link between per capita income and changes in population at the county level is far from being consistent, the two variables generally tend to move together over the long run, particularly in the large metropolitan populations. In those cases where a county did not fall into the usual or expected pattern of population changes as related to its income level, other factors are identifiable which may have influenced the population and/or income growth pattern. For instance, locational factors were influential in Dickson County, which had a relatively low per capita income level in 1980, but which experienced a 36.7 percent increase in population for the decade. An obviously important cause of this county's population growth is its proximity to the Nashville metropolitan area. Much the same thing can be said about Bradley County—located near the Chattanooga metropolitan area—which had a significant population increase in the 1970s (33.3 percent) but a relatively low income level in 1980. Anderson County, with relatively low population growth of only 11.7 percent for 1970-1980, recorded a high per capita income (third after Williamson and Davidson counties) in 1980. One explanation is that Anderson County is home to several very large and high value-added industries. Also, it is located near Knoxville—a relatively large metropolitan area.

The salubrious effect which Knoxville, Nashville, and Chattanooga have on the income and population of at least one contiguous county was not evident in Memphis. Neither of the two Tennessee counties contiguous to Shelby—Tipton and Fayette—showed either extraordinary growth rates or high per capita incomes in 1980. However, both a burgeoning population and a high per capita income were observed in an adjoining out-of-state county—DeSoto County, Mississippi—which benefited far more from the growth of the Memphis metropolitan area than did adjacent in-state counties.

Summary and Conclusion

This article has stressed the usefulness of demographic data in general, and population location and dispersion data in particular, for understanding Tennessee's social and economic make up. These data reveal that Tennessee's population increased 16.9 percent (665,102 persons) from 1970 to 1980. This contrasts with the national population growth rate of 11.4 percent during the decade. Tennessee was the recipient of the continuing shift of employment, income, and population from the economically mature states in the North to the less industrialized states of the South. However, Tennessee grew even faster during the relevant period than many other southern states.

In the above analysis, a pattern emerges which shows that significant population growth occurred in the last decade in the Middle and Eastern divisions of the state. Each division had population nodes which accounted for much of their increase. Specifically, four Middle Tennessee counties—all located in the Nashville SMSA—recorded increases in population from 1970 to 1980 of more than 50.0 percent and accounted for much of the population increase recorded for this division. The Eastern division of the state recorded an increase in population of 19.1 percent during the decade. Population buildups in Knox, Hamilton, and Washington counties explain a significant part of this increase. Several communities with high concentrations of retirees are located in counties in this division. The population increase in Shelby County, and to a lesser degree in Madison County, accounted for a major part of the 9.7 percent increase recorded in the Western division.

There was also a substantial increase in city population throughout the state. Cities in every size category except the under 1,000 class showed increases. Although the Eastern and Middle divisions of the state again experienced the greatest relative city growth for the decade, Memphis, located in the western part of the state, experienced the largest absolute gain with 55,002 persons. The data do not reveal a significant population flow from non-metropolitan areas (small towns and rural areas) to large metropolitan areas in Tennessee.

Census data show that Tennessee's population is presently 60.4 percent urban and 39.6 percent rural in nature. There was a 19.6 percent increase in the state's urban population during the 1970s, in contrast to a 13.2 percent increase in the rural population. However, the rural population is still a sizable segment of the state's population. It remains true that urban counties with a larger part of their economies devoted to manufacturing, commerce, and service have an edge over rural agricultural counties in attracting and retaining population, despite the problems of congestion, inadequate housing, crime, and noise pollution which often exist in cities. To some degree, the urban problems of congestion and overcrowding in the state's larger cities may be viewed in part as the result of the inability of rural areas to attract and retain population. Therefore, it is useful to study rural and urban population growth patterns in combination rather than individually.

Data in this report may be helpful to government officials and businessmen. It will help provide specific data about where population growth is concentrated, where efforts to provide social services should be focused, and the areas of the state that are most appropriate sites for particular facilities or organizations. A thorough knowledge of state and county impacts of known population changes can help government agencies and private businesses reduce planning errors and utilize their limited resources more efficiently.

FOOTNOTES

[1] Population data reported in this article are extracted from various census publications for the period from 1900 to 1980. Sources and methods of computation for figures will be supplied to any reader upon request.

Table 3

POPULATION CHANGE FOR TENNESSEE COUNTIES AND COUNTY RANK, 1970-1980

	1970 Census		1980 Census		1970-80 Change		1970-80 Change	
County	Number	Rank	Number	Rank	Number	Rank	Percent	Rank
			Western Division Counties					
Benton	12,126	71	14,901	70	2,775	59	22.9	33
Carroll	25,741	36	28,285	43	2,544	63	9.9	84
Chester	9,927	77	12,727	77	2,800	58	28.2	21
Crockett	14,402	62	14,941	68	539	93	3.7	91
Decatur	9,457	78	10,857	79	1,400	82	14.8	70
Dyer	30,427	26	34,663	29	4,236	43	13.9	73
Fayette	22,692	44	25,305	46	2,613	62	11.5	81
Gibson	47,871	14	49,467	19	1,596	79	3.3	93
Hardeman	22,435	45	23,873	51	1,438	81	6.4	90
Hardin	18,212	54	22,280	54	4,068	46	22.3	35
Haywood	19,596	51	20,318	57	722	91	3.7	91
Henderson	17,360	55	21,390	56	4,030	47	23.2	32
Henry	23,749	42	28,656	41	4,907	39	20.7	43
Lake	8,074	82	7,455	87	- 619	95	- 7.7	95
Lauderdale	20,271	50	24,555	49	4,284	42	21.1	40
Madison	65,774	7	74,546	11	8,772	20	13.3	76
McNairy	18,369	53	22,525	53	4,156	44	22.6	34
Obion	30,247	27	32,781	33	2,534	64	8.4	86
Shelby	722,111	1	777,113	1	55,002	1	7.6	87
Tipton	28,001	32	32,930	31	4,929	38	17.6	57
Weakley	28,827	30	32,896	32	4,069	45	14.1	72
			Middle Division Counties					
Bedford	25,039	38	27,916	44	2,877	56	11.5	81
Cannon	8,467	80	10,234	80	1,767	78	20.9	42
Cheatham	13,199	66	21,616	55	8,417	21	63.8	2
Clay	6,624	87	7,676	86	1,052	85	15.9	66
Coffee	32,572	25	38,311	26	5,739	32	17.6	57
Davidson	447,877	2	477,811	2	29,934	4	6.7	89
DeKalb	11,151	75	13,589	76	2,438	66	21.9	38
Dickson	21,977	47	30,037	37	8,060	22	36.7	11
Fentress	12,593	67	14,826	71	2,233	72	17.7	54
Franklin	27,289	33	31,983	35	4.694	40	17.2	60
Giles	22,138	46	24,625	47	2,487	65	11.2	83
Grundy	10,631	76	13,787	73	3,156	52	29.7	18

(continued)

Table 3 (continued)

County	1970 Census		1980 Census		1970-80 Change		1970-80 Change	
	Number	Rank	Number	Rank	Number	Rank	Percent	Rank
Hickman	12,096	72	15,151	67	3,055	53	25.3	29
Houston	5,853	89	6,871	90	1,018	86	17.4	59
Humphreys	13,560	65	15,957	65	2,397	68	17.7	54
Jackson	8,141	81	9,398	83	1,257	83	15.4	69
Lawrence	29,097	29	34,110	30	5,013	47	17.2	60
Lewis	6,761	85	9,700	81	2,939	55	43.5	6
Lincoln	24,318	40	26,483	45	2,165	75	8.9	85
Macon	12,315	70	15,700	66	3,385	50	27.5	22
Marshall	17,319	56	19,698	58	2,379	69	13.7	75
Maury	44,028	16	51,095	17	7,067	25	16.1	64
Montgomery	62,721	9	83,342	9	20,621	8	32.9	16
Moore	3,568	95	4,510	94	942	88	26.4	26
Overton	14,866	60	17,575	61	2,709	60	18.2	52
Perry	5.238	90	6,111	92	873	89	16.7	62
Pickett	3,774	93	4,358	95	584	92	15.5	68
Putnam	35,487	21	47,690	22	12,203	15	34.4	13
Robertson	29,102	28	37,021	27	7,919	24	27.2	24
Rutherford	59,428	11	84,058	8	24,630	6	41.4	8
Sequatchie	6,331	88	8,605	85	2,274	71	35.9	12
Smith	12,509	68	14,935	69	2,426	67	19.4	47
Stewart	7,319	84	8,665	84	2,346	70	18.4	51
Sumner	56,266	12	85,790	7	29,524	5	52.5	3
Trousdale	5,155	92	6,137	91	982	87	19.0	48
Van Buren	3,758	94	4,728	93	970	90	25.8	27
Warren	26,972	34	32,653	34	5,681	33	21.1	40
Wayne	12,365	69	13,946	72	1,581	80	12.8	79
White	16,329	58	19,567	59	3,238	51	19.8	46
Williamson	34,423	23	58,108	14	23,685	7	68.8	1
Wilson	36,999	20	56,064	15	19,065	9	51.5	4
Eastern Division Counties								
Anderson	60,300	10	67,346	13	7,046	26	11.7	80
Bledsoe	7,643	83	9,478	82	1,835	77	24.0	31
Blount	63,744	8	77,770	10	14,026	13	22.0	37
Bradley	50,686	13	67,547	12	16,861	10	33.3	15
Campbell	26,045	35	34,923	28	8,878	19	34.1	14
Carter	43,259	17	50,205	18	6,946	28	16.1	64
Claiborne	19,420	52	24,595	48	5,175	36	26.6	25
Cocke	25,283	37	28,792	38	3,509	49	13.9	73
Cumberland	20,733	48	28,676	40	7,943	23	38.3	10
Grainger	13,948	63	16,751	62	2,803	57	20.1	44
Greene	47,630	15	54,422	16	6,792	29	14.3	71
Hamblen	38,696	19	49,300	20	10,604	16	27.4	23
Hamilton	255,077	4	287,740	4	32,663	3	12.8	78
Hancock	6,719	86	6,887	89	168	94	2.5	94
Hawkins	33,757	24	43,751	23	9,994	17	29.6	19
Jefferson	24,940	39	31,284	36	6,344	31	25.4	28
Johnson	11,569	74	13,745	74	2,176	74	18.8	49
Knox	276,293	3	319,694	3	43,401	2	15.7	67
Loudon	24,266	41	28,553	42	4,287	41	17.7	54
McMinn	35,462	22	41,878	24	6,416	30	18.1	53
Marion	20,577	49	24,416	52	3,839	48	18.7	50
Meigs	5,219	91	7,431	88	2,212	73	42.4	7
Monroe	23,475	43	28,700	39	5,225	35	22.3	35
Morgan	13,619	64	16,604	63	2,985	54	21.9	38
Polk	11,669	73	13,602	75	1,933	76	16.6	63
Rhea	17,202	57	24,235	50	7,033	27	40.9	9
Roane	38,881	18	48,425	21	9,544	18	24.5	30
Scott	14,762	61	19,259	60	5,503	34	30.5	17
Sevier	28,241	31	41,418	25	13,177	14	46.7	5
Sullivan	127,329	5	143,968	5	16,639	11	13.1	77
Unicoi	15,254	59	16,362	64	1,108	84	7.3	88
Union	9,072	79	11,707	78	2,635	61	29.0	20
Washington	73,924	6	88,755	6	14,831	12	20.1	44

A NEW VERSION OF DEREGULATION: SHELF REGISTRATION AND ITS IMPLICATIONS FOR THE FUTURE

*Stanley Block**

In March 1982, the Securities and Exchange Commission introduced a new rule that has profoundly changed the nature of investment banking. Of equal importance, it has also changed the nature of corporate financial management. Rule 415 specifies that corporations can file a single comprehensive registration statement with the SEC that lays out their plans for future financing over the following two years. With the registration statement thus sitting "on the shelf" at the SEC, companies can sell some or all of their securities when market conditions appear appropriate.

This is very different from the traditional procedure in which a comprehensive, time-consuming registration statement must be filed each and every time the corporation issues securities. Under shelf registration, securities are brought to the market instantaneously, leaving little time for underwriters to put together a syndicate. Typically, large underwriters simply bid on the deal and handle it by themselves (or perhaps with another large underwriter). As an example, in 1982 Goldman Sachs transacted, by itself, a shelf registration of a $75 million debt offering for Union Camp Corporation. Two years earlier, there were 70 underwriters involved in a similar Union Camp offering.

Shelf registration is part of the federal government's emphasis on deregulation. The shift toward less federal government involvement in the issuance of securities is, perhaps, the most significant reversal of security regulation since the passage of the Securities Act of 1933 and the Securities Exchange Act of 1934. For fifty years, the working assumption has been that a federal watchdog was necessary at all points in the issuance of securities to insure the public interest. U.S. capital markets were portrayed as the model to the rest of the world in the provision of timely data. If a firm could meet the registration and reporting procedures in the United States, chances are it could meet them anywhere in the world. While shelf registration in and of itself does not change the full and immediate disclosure requirements in the United States, it is a significant move toward less regulation and greater individual corporate responsibility in the provision of information.

In this article, the author considers the impact of shelf registration on the investment banking industry, on corporate financial management, and on the investing public.

Investment Banking and Shelf Registration

When deregulation has come to other industries such as the airline or stock brokerage industries, the emphasis has been on survival of the fittest. The stronger and more efficient have prospered, while smaller, less efficient firms have diminished in importance. Ultimately, there has occurred more concentration in the industry brought about by business failures and mergers and acquisitions. The same pattern appears to be taking place in the investment banking industry.

Shelf registration is relatively new so it is difficult to assess all its implications. Furthermore, while shelf registration has the potential to replace the traditional syndicated offerings over the long-term, they still co-exist. For example, from March 1982 to year-end 1982, there were $16 billion in shelf registration debt offerings out of total debt offerings of $48.5 billion. In the equity sector, shelf registration represented $1.96 billion out of $16 billion.[1] The balance in each instance was made up of traditional syndicated offerings. In 1983, the percentage of shelf registered issues to syndicated offerings continued to increase.

More important, for purposes of this analysis, is the highly concentrated and competitive nature of these shelf registrations. Two investment banking firms, Morgan Stanley and Salomon Brothers, did almost half the shelf issues in 1982.[2] By including three other major investment banking houses, Merrill-Lynch White Weld, Goldman Sachs, and First Boston, the total concentration in shelf registration is up to 75.0 percent.[3] While there has always been a degree of concentration in the investment banking industry, this far exceeds historical precedents. Firms that have had a presence as lead underwriters in traditional syndicated offerings such as Dillon Read, Bear Stearns, and Lazard Freres show little or no evidence of activity in

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shelf registration offerings. As an example, Dillon Read was the principal investment banker for CIT Financial as late as April 1982. During the next six months, CIT did four shelf registration deals in which Dillon Read was not represented even once.

The reason for the capital market oligopoly related to shelf registration deals is that it is a very risky business. Only those investment banking houses that are highly capitalized and experienced in risk management have chosen to play the game. In the traditional syndicated deals the risks are not nearly so great. First of all in the syndicated arrangement, all features of the deal are carefully negotiated between the issuing corporation and the lead investment banker. The concerns of both parties are taken into consideration. The risk that inevitably belongs to the investment banker is further divided among the members of the syndicate.

Under shelf registration, there is no longer friendly negotiations, but rather competitive bidding for corporate offerings (similar to that in the government bond market). The popular term for an underwriter getting an offering is a "bought-deal." The bought-deal generally goes to the investment banking house that allows itself the smallest spread in taking the issue to market. If Consolidated Iron and Steel is selling for $40 a share, and Morgan Stanley will do a deal on a 0.5 percent spread (pay the corporation $39.80 with the anticipation of selling at $40), while Goldman Sachs wants a 0.7 percent spread, Morgan Stanley will probably get the deal.

The normal procedure is for the issuing corporation to take a portion of the securities that have been registered under Rule 415 off the shelf and let the investment bankers know it is taking bids. Interested investment bankers move very quickly to make their proposals. A deal may be put together in a matter of hours. An aggressive investment banking house may be bidding on six or seven deals in one day. Needless to say, a strong capital base is needed for this kind of fast-moving activity.

Competitive bidding has tended to cut down the normal underwriting spread, thus decreasing profitability and increasing risk. At the extreme, Salomon Brothers actually did a spreadless common stock deal for Gulf States Utilities in October 1982,[4] and Morgan Stanley sustained a negative spread on AT&T in May 1982.[5] While these are the exceptions, they indicate the nature of a competitive marketplace. More generally, the spreads average 0.5 percent to 1.0 percent, with the large volume to the major investment houses compensating for the declining profit margins.

Concentration in the industry is taking place not only as a function of fewer firms choosing to stand up to the rigors of competitive bidding, but also because there is no longer the "security blanket" positions associated with being part of a syndicate. While many smaller regional investment firms never really aspired to be lead bankers, they were able to prosper within the industry as a result of being nurtured through syndicate participations. These firms were happy to be one of the 25 or so underwriters in a deal, perhaps with less than 1.0 percent of the action. Since shelf registration calls for instantaneous deals without the benefit of long, extended syndicated distributions, smaller firms have had difficulty in establishing their normal positions. As procedures under shelf registration become better established, it is possible that preformed bidding syndicates, that include smaller underwriters, could be utilized. This might be analogous to syndicates that are used in oil and gas lease bidding. The only structural difference, in comparison to other bidding syndicates for securities, would be the extreme speed with which the deal must be put together.[6]

Impact on Corporate Finance

Shelf registration has not only changed the nature of investment banking, it has changed the manner in which chief financial officers (CFOs) of corporations must interact with investment bankers. The traditional advisor-client relationship is breaking down. In the emerging era of shelf registration, no longer can the CFO look to the investment banker as a member of the corporate team as he or she has done in the past. Historically, a corporation has had its own investment banking firm just as it has had its own law firm or public accounting firm. Long-standing relationships existed with Morgan Stanley, Goldman Sachs, First Boston, or other investment banking houses. Likewise, major-bracket investment banking houses took great pride in counting the number of "Fortune 500" companies in their stable.

In the traditional mode, the investment banker advised the corporate client about what type of securities should be issued, when they should be issued, and at what price. The investment banker also carefully considered the impact of the security issuance on the financial ratios of the firm and any potentially dilutive effect on earnings per share. An astute investment banker would further consider such matters as the impact of an acquisition or new product on the firm's image and its price-earnings ratio. In summary, the investment banker often represented the firm's intelligence gathering unit for the investment community.

With shelf registration the rules of the game are changing. It is up to the CFO to file the shelf registration statement and invite the investment bankers in for bidding. It is the responsibility of the CFO to determine what security to issue and when, and which bid to accept. Many traditional CFOs, with somewhat limited knowledge of financial markets, will have difficulty in operating in this environment. Inevitably, there will be a premium paid for the sophisticated CFO, who has perhaps even had investment banking experience. He or she will not only have strong financial management skills, but will be effective in bid management techniques and "instant" decision making on new securities issues. He or she must also be adaptive to new security devices that investment bankers are developing in the context of the highly competitive capital market environment.

As traditional investment banking relationships change, the CFO will supplant part of the investment banking role with fee-based services. While in the past an investment banker, sitting on a corporation's board and managing the firm's underwritings, might have provided advice on private placements, mergers and acquisitions, and real estate financing, part of the same service will now be purchased on a fee basis.

Perhaps the best evidence of how old and new methods of doing business are being conducted can be found in a $100 million offering by Kerr-McGee Corp. in 1982.[7] The winning bids were shared by Morgan Stanley and First Boston. There was no problem with that except that two partners of another investment banking firm, Lehman Brothers Kuhn Loeb, sat on the Kerr-McGee Board (eventually Lehman was cut in for part of the deal). This type of vigorous competition simply was not in evidence in more traditional times when a monogamous relationship between the firm and its investment banker was the norm.

Shelf Registration and the Investor

The investor is also influenced by shelf registration. The hurry-up approach associated with shelf registration can make a mockery of the "due diligence" responsibility of the investment banker to the investor in a security offering. There is no way an instant deal can possess the same degree of scrutiny as a carefully supervised syndicated offering. As an example, Zale Corp. issued debt in 1982 at the very time they were facing an imminent decline in ratings of their bond issues. The offer was handled under the rapid fire procedures of shelf registration. If there had been the thorough investigative procedures traditionally associated with issuing debt, the potential downgrading may have come to the surface prior to or in conjunction with the new issue.

The watchword in shelf registration deals appears to be caveat emptor for the investor. At least that is the current situation. The procedure is still too new to have passed the challenge of lawsuits by unhappy stock- or bond-holders. If there were to be a major class action suit that was ruled in favor of the plaintiffs, operational procedures under shelf registration would no doubt be amended.

The absence to date of significant legal action or legislative challenge may be traced, in part, to the strong bond and stock market environment under which shelf registration was developed. Shelf registration was initiated in March 1982, only five months before the beginning of the great bull market of the 1980s. Investors tend to be much more tolerant of potential abuses when their pocketbooks are being enlarged than when purchases have gone sour.

Many investment banking houses that initially challenged the appropriateness of shelf registration because of due diligence concerns are now silent. In fact, some are currently among the leaders in putting shelf registration deals together. Whether they have been lulled into a false sense of security can only be viewed with the passage of time.

Investment bankers can take some solace in the fact that in most shelf registration bought-deals the initial purchasers in the distribution are institutional investors. The caveat emptor principle is perhaps more acceptable when large financial institutions are dealing with each other. The traditional syndicate arrangement is still the preferred method for moving securities to small individual investors, though shelf registration is making some inroads here as well.

Debt vs. Equity

Shelf registration is much more heavily utilized in the debt sector of the market than in the equity sector.[8] A number of reasons can be offered for this. First of all, corporate issuers tend to be highly sensitive to the dilutive nature of new stock issues. For EPS-sensitive corporations, it's bad enough to have to issue new shares, but even worse to have to register a large volume of new shares which may or may not be issued over the next two years. Corporations are concerned that analysts may be computing the potentially dilutive effect even before the funds get to the corporation and can be redeployed for productive purposes.

Another reason why shelf registration is not as popular for equity issues is that issuing corporations generally wish to have their shares widely distributed. As previously mentioned, a shelf registration deal as opposed to a traditional syndicated offering often moves the securities from the investment banker directly into the hands of institutional investors. This, of course, does not provide the far-reaching network of distribution to individual investors that corporations frequently desire. An initial widespread distribution of securities has become particularly important in the recent time period of unfriendly takeover strategies. Corporations that have highly concentrated outside holdings of their securities are much more vulnerable to being a target for takeovers. A concentrated initial distribution of an equity issue can also lead to institutional dumping of large blocks of securities during market weakness, which can have an accentuated downside effect on the issue.

Bonds are also more amenable to the rapid fire action associated with shelf registration because of the established bond ratings procedures utilized by Moody's Investors Service, Inc., and Standard and Poor's Corporation. Although the ratings are not foolproof and there may even be lags in changing ratings to reflect economic circumstances, they do serve as a good initial measure in the evaluation and pricing of a security. A bond with an Aa2 rating, for example, can be assumed to have a certain degree of safety relative to a bond with a Baa2 rating. Investors are less willing to accept such shorthand methods of evaluation in the case of equity issues where exhaustive first-hand analysis may be the only acceptable mode of operation.

Overview

As previously described, a new way of doing business has come on to the corporate scene in the 1980s. While shelf registration is subject to further review before being continued indefinitely by the SEC,[9] the conventional wisdom is that shelf registration will be with us for the foreseeable future.[10] In fact, on November 11, 1983, the SEC voted continued support for the shelf registration procedure. The only exception was a provision that

MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

THE MID-SOUTH ECONOMY

The U.S. and Mid-South economies entered 1984 with strong momentum, continuing the pace set in the latter part of 1983. This rate of growth is, however, expected to moderate as the year progresses. From fourth quarter 1983 to fourth quarter 1984, the nation's real Gross National Product is projected to grow 4.1 percent. Consumers remain optimistic as the Conference Board's index of consumer sentiment registered its fifth consecutive gain in January 1984, increasing 39.8 points since last January's reading of 58.0 (1969-70 = 100.0). In addition, inflation is anticipated to remain moderate in 1984, reflecting the view that energy prices and labor costs will remain stable. However, continued upward pressures on interest rates caused by the federal deficit, bottlenecks in capacity-constrained industries, and record-setting international trade deficits could delay any meaningful gains in the nation's economic performance.

The Mid-South is poised to maintain the momentum of its economic upturn. The revival in residential construction has stimulated housing-related purchases of durable goods, while strong consumer spending in general has led to significant increases in purchases of non-durable goods. The Mid-South region in 1984 should feel the benefits from anticipated increases in business investment, higher defense spending (currently the value of shipments to the Department of Defense by Mid-South states exceeds $2.0 billion), and the expected increase in tourism resulting from the opening of the World's Fair in New Orleans. The U.S. Travel Data Center reports that the outlook for the U.S. travel industry is the brightest since 1976.

LABOR

The recovery in 1983 brought prospects for improvement in the region's labor markets. Across the Mid-South, total non-agricultural employment rose 2.6 percent from last January, while the number of unemployed persons declined 11.7 percent. The Mid-South's aggregate unadjusted unemployment rate stood at 11.4 percent for January 1984 versus the 13.2 percent rate registered a year earlier. Major metropolitan areas in the Mid-South experienced significant declines in unemployment with Birmingham, Alabama declining from 16.3 percent in January 1983 to 12.3 percent in January 1984. Jackson, Mississippi currently has the lowest metropolitan unemployment rate in the Mid-South at 6.8 percent. Significant declines in the region's unemployment rate are expected in 1984 because of slower growth in the civilian labor force and continued gains in real economic activity.

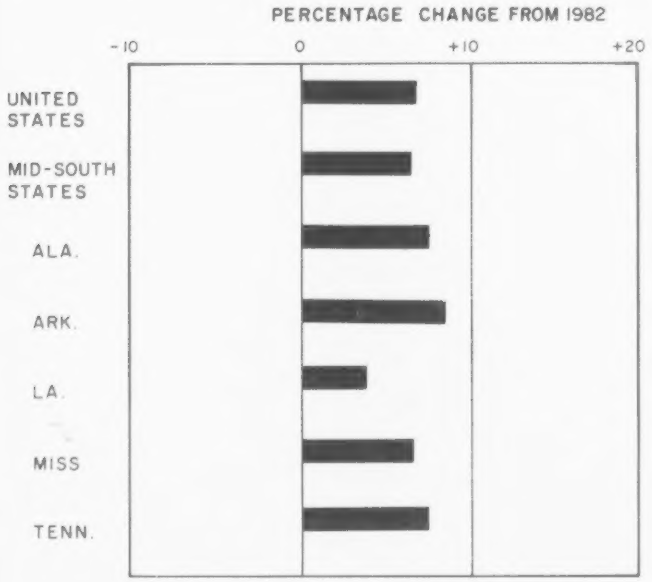
For Mid-South durable goods manufacturers, electric/electronic equipment registered the better gain in employment (employing 15,400 more workers than last January), followed by non-electrical machinery and furniture/fixtures. Mid-South manufacturers of apparel and rubber/plastics experienced the better gains from last January in the non-durable goods sector. On the non-manufacturing side, retail trade and service posted large gains, with government and finance, insurance, and real estate also registering healthy increases.

The nation's unemployment rate is anticipated to fall below 8.0 percent during 1984, with a projected unemployment rate of 7.4 percent by year's end. However, the current business recovery has affected various segments of the labor market in different ways. Industry-wise, January unemployment rates for construction, mining, lumber/wood products, primary metals, food/kindred products, and agricultural workers remain above 12.0 percent. And, while durable goods manufacturers managed to cut their unemployment almost in half, the non-durable goods manufacturing sector barely managed to fall below double digits.

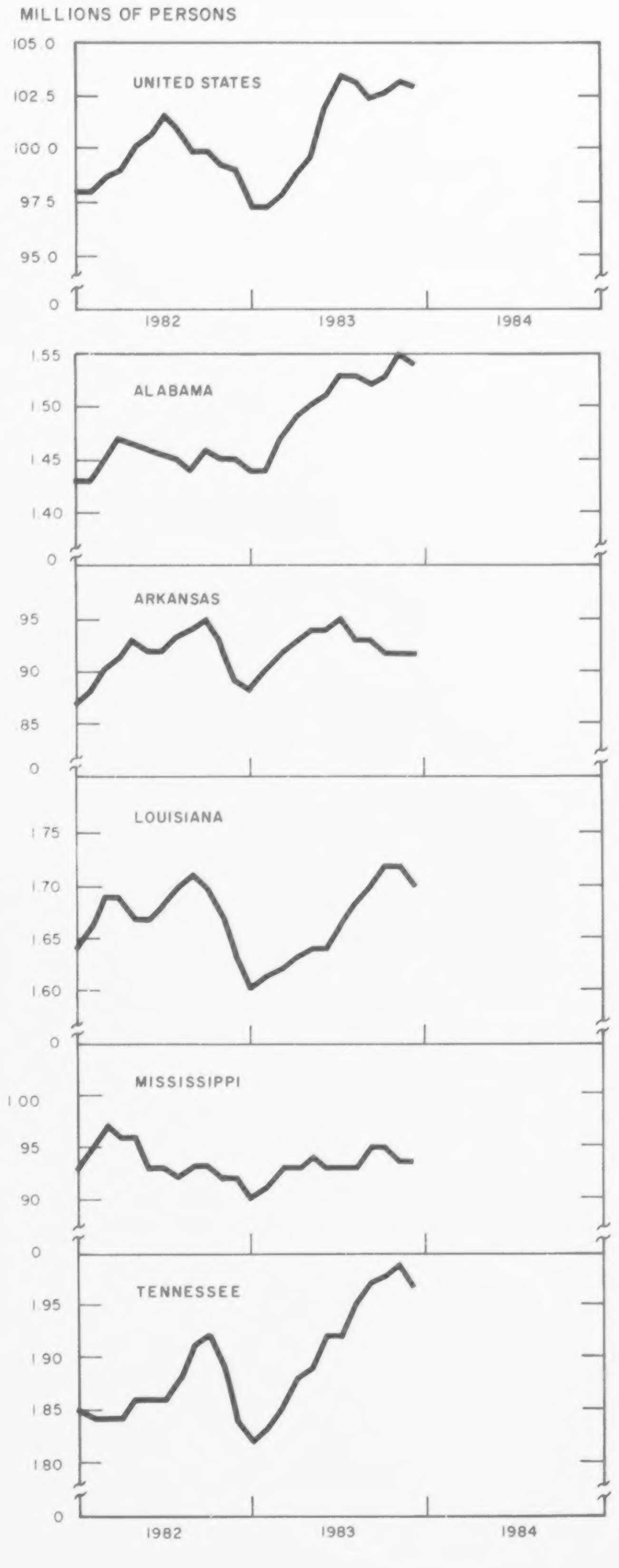
CONSTRUCTION

The construction industry entered 1984 at a high rate of activity. However, total new construction is expected to increase at a slower rate throughout the remainder of 1984 due to a leveling off in residential construction. Private non-residential construction activity is anticipated to be lower for the year as a whole. The Commerce Department's forecast of the dollar value of new construction put in place by sectors in 1984 indicates that office buildings will decline 5.0 percent, manufacturing will be off 2.0 percent,

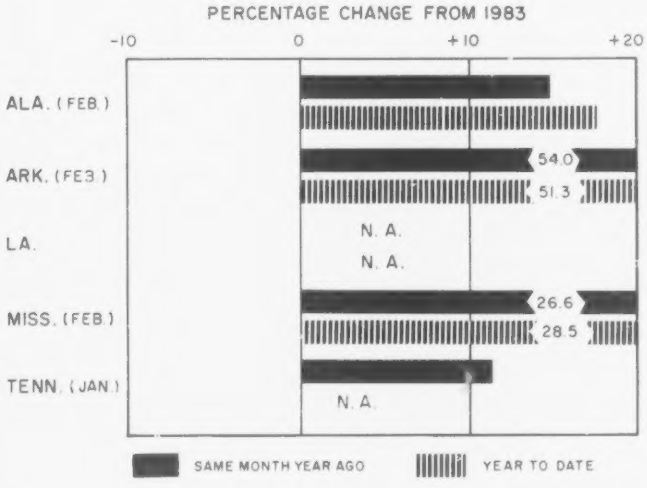
PERSONAL INCOME - III QTR. 1983



TOTAL EMPLOYMENT

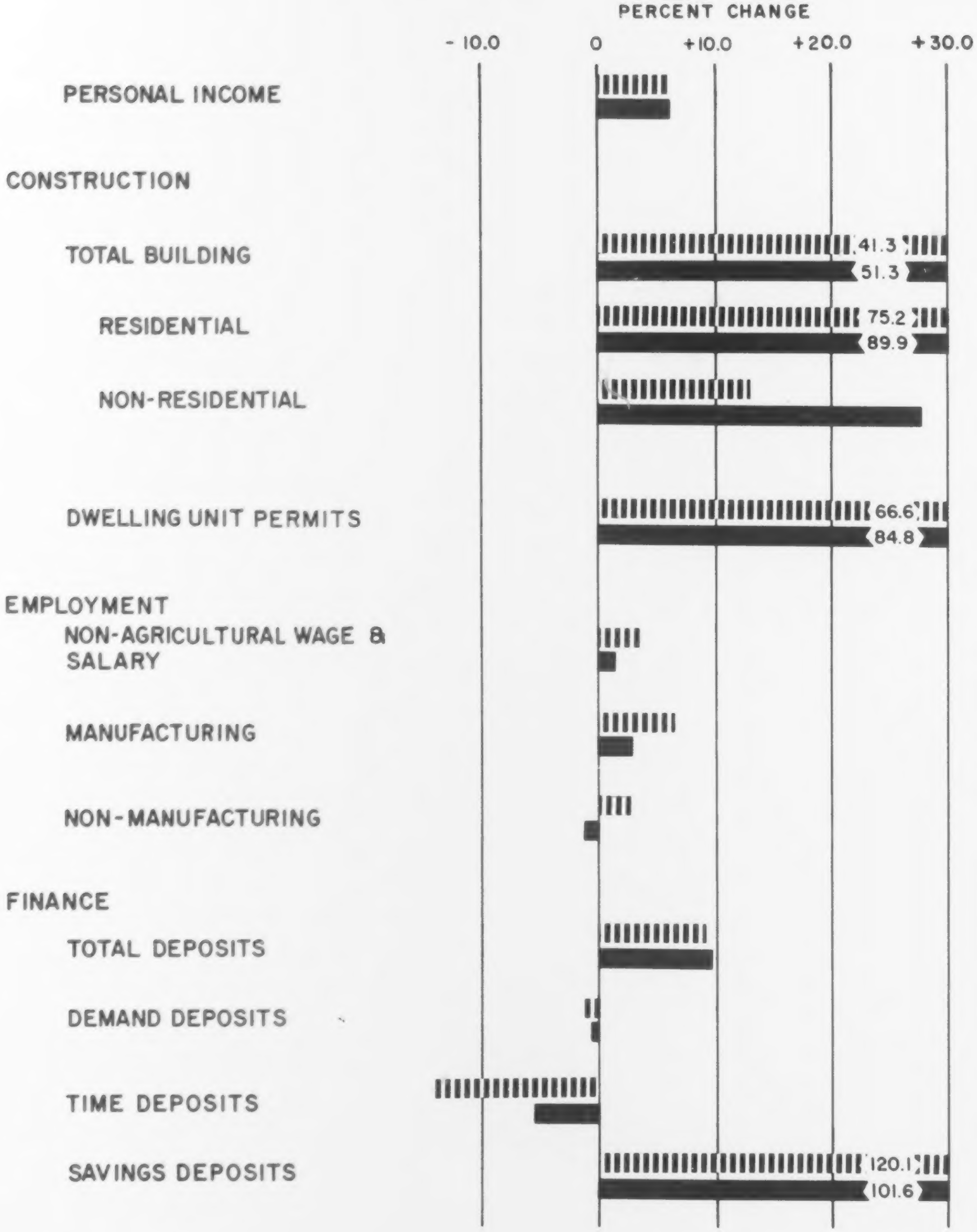


SALES TAX COLLECTIONS 1984



SOURCES: BUREAU OF ECONOMIC ANALYSIS
STATE DEPARTMENTS OF EMPLOYMENT
SECURITY AND REVENUE.

THE MID-SOUTH ECONOMY AND U.S. ECONOMY
1983 COMPARED WITH 1982



SOURCE: SURVEY OF CURRENT BUSINESS; FEDERAL RESERVE BANK OF ATLANTA; BUREAU OF ECONOMIC ANALYSIS; STATE EMPLOYMENT SERVICES.

Legend
UNITED STATES ▥
MID - SOUTH ■

ANALYSIS OF ANNUAL CHANGES IN THE MID-SOUTH ECONOMY

For the U.S. and the Mid-South economies 1983 was a productive year. Optimistic consumers began to buy, and business responded with increased production. Constant dollar retail sales for 1983 were 6.5 percent higher than 1982 levels, and the index of industrial production for December 1983 was 16.1 percent higher than a year earlier. The nation's real Gross National Product advanced 6.1 percent for the year ending in the fourth quarter of 1983, exceeding the 5.0 percent average rate of recovery for the three previous recoveries. Continued dramatic improvements were made on the inflation front with a 1983 increase of 3.2 percent in the Consumer Price Index and a 1.8 percent rise in the Producer Price Index. Further evidence of a robust economy materialized in a 3.5 percent improvement in productivity and a capacity utilization rate of 79.8 in the fourth quarter of 1983.

The composition of the 1983 recovery, however, was somewhat different than during the three previous recoveries. While the growth of real personal consumption expenditures was on par with the first year of previous recoveries, the advance of real gross private domestic fixed investment was quite strong, primarily due to the residential sector. Real residential fixed investment from fourth quarter 1982 to fourth quarter 1983 rose 38.2 percent versus an average recovery rate of 22.6 percent, and real non-residential fixed investment rose 11.5 percent versus a 3.7 percent rate in previous recoveries. On the other hand, net exports (exports minus imports) showed a very large decline, as imports rose sharply and real government purchases fell 2.2 percent, primarily due to the operations of the Commodity Credit Corporation (CCC). Under the PIK program, farmers took title to an estimated $3.0 billion of crops previously held by the CCC. Excluding the CCC, real federal purchases in 1983 were up 4.5 percent, led by a 5.3 percent rise in defense spending. Interest rates held fairly steady in 1983 with the Treasury bill rate at 8.96 percent in December 1983 versus 8.01 percent a year earlier. The secondary market yields on Federal Home Administration mortgages were 13.25 percent for December 1983 versus 12.80 percent for December 1982.

Table 1
1983 PERSONAL INCOME AND PERCENTAGE CHANGE FROM 1982

Area	Personal Income, First Nine Months, 1983 (Millions)	Percent Change From First Nine Months, 1982
United States	$2,001,030	+ 5.8
Mid-South Region	123,737	+ 5.9
Alabama	26,356	+ 7.3
Arkansas	15,377	+ 8.0
Louisiana	33,845	+ 4.6
Mississippi	15,458	+ 8.0
Tennessee	32,701	+ 6.7

Source: *Business Week*, February 27, 1984.

For the Mid-South economy, sales tax collections, a proxy measure of retail sales, rose 6.1 percent in 1983 from 1982. For the first nine months of 1983 versus the same period in 1982, the growth in personal income in four of the five Mid-South states substantially outperformed the national increase of 5.8 percent. Louisiana trailed the Mid-South performance with a drop in sales tax collections and only a modest increase in personal income. Meanwhile, the unadjusted aggregate unemployment rate for the Mid-South stood at 9.5 in December 1983, 3.4 percentage points below the December 1982 level.

Table 2
1983 MID-SOUTH SALES TAX COLLECTIONS AND PERCENTAGE CHANGE FROM 1982

Area	1983 Collections (Thousands)	Percent Change From 1982
Mid-South States	$3,545,949	+ 6.1
Alabama	609,132	+ 8.4
Arkansas	399,632	+ 8.9
Louisiana[1]	610,000	- 7.2
Mississippi	701,747	+ 2.4
Tennessee	1,225,438	+ 7.1

[1] Collections thru October 1983.

Source: State Departments of Revenue.

The overall recovery in production in 1983 was translated into impressive improvements in the labor markets. Some 3.9 million workers were added to the nation's non-agricultural payrolls during 1983, while the Mid-South had 255,600 fewer people unemployed for the year. The most rapid gains for the nation were registered in durable goods manufacturing and construction, the sectors hit hardest during the recession. Automotive and textile employment also experienced substantial gains. For the Mid-South, solid gains were registered in retail trade and services, adding 35,700 jobs, and government, up 14,300. Machinery manufacturing also posted a gain of some 21,400 jobs. Tennessee and Arkansas registered their best gain in machinery manufacturing and services. Mississippi's best gains were concentrated in wood products and furniture, while Alabama's gains were in textiles and government employment. Louisiana's gains were concentrated in the non-manufacturing sector, with government and retail trade the best performers. The major losing categories across the Mid-South were chemicals and transportation equipment manufacturing. Overall for 1983, manufacturing employment in the Mid-South increased 2.7 percent or 37,300 jobs, while non-manufacturing declined 1.1 percent versus a 2.8 percent gain in the nation.

Table 3

LABOR, DECEMBER 1983, AND PERCENTAGE CHANGE FROM DECEMBER 1982

LABOR DECEMBER 1983	United States	Mid-South States				
		Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Civilian Labor Force	111,795,000	1,763,100	989,400	1,899,000	1,026,700	2,199,300
Percent Change Year Ago	+ 1.2	+ 2.5	- 0.9	+ 2.4	- 2.3	+ 4.1
Unemployed	8,992,000	217,300	93,000	191,100	103,100	226,000
Percent Change Year Ago	-22.7	-18.6	-13.7	-11.3	-16.9	-16.0
Unemployment Rate						
1983	8.0	12.3	9.4	10.1	10.0	10.3
1982	10.5	15.5	10.8	11.6	11.8	12.7
Non-Agricultural Wage & Salary Employees	92,289,000	1,326,300	753,900	1,594,800	800,800	1,713,500
Percent Change Year Ago	+ 3.3	+ 1.2	+ 4.8	- 0.8	+ 0.9	+ 2.7
Manufacturing Employment	19,271,000*	334,600	205,900	190,300	207,500	482,500
Percent Change Year Ago	+ 5.9	+ 2.8	+ 7.9	- 4.4	+ 4.9	+ 5.7
Non-Manufacturing Employment	72,373,000*	991,700	548,000	1,404,500	593,300	1,231,000
Percent Change Year Ago	+ 2.7	+ 0.7	+ 3.6	- 0.3	- 0.4	+ 1.6
Average Weekly Earnings of Production Workers in Manufacturing	$372.86	$321.98	$294.67	$394.18	$289.67	$ 313.18
Percent Change Year Ago	+ 8.2	+ 9.4	+ 7.6	- 1.8	+10.6	+ 6.2
Average Weekly Hours of Production Workers in Manufacturing	41.2	41.6	40.7	40.1	41.5	41.1
Percent Change Year Ago	+ 3.8	+ 5.1	+ 2.5	- 6.1	+ 3.5	+ 3.3
Average Hourly Earnings of Production Workers in Manufacturing	$ 9.05	$ 7.74	$ 7.24	$ 9.83	$ 6.98	$ 7.62
Percent Change Year Ago	+ 4.3	+ 4.2	+ 4.9	+ 4.6	+ 6.9	+ 2.8

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

Total new construction activity increased sharply in 1983 after several years of stagnation. For the period ending in November 1983, total building activity in the U.S. rose 41.3 percent compared to the same period in 1982. For the Mid-South (excluding Arkansas), total building activity totaled $5.5 billion, a rise of 51.3 percent. Much of this turnaround was due to a dramatic rise in residential construction, up 75.2 percent in the nation versus an 89.9 percent increase in the Mid-South. The total number of permit-issued housing units rose 66.6 percent in the nation versus 84.8 percent in the Mid-South.

The Mid-South states (excluding Arkansas) also outperformed the nation in the non-residential sector with an increase of 27.8 percent versus a 12.9 percent rise in the nation. The best gains were registered in hospitals and schools, up 103.2 and 95.7 percent, respectively, versus

Table 4

PERCENTAGE CHANGE IN BUILDING ACTIVITY FOR 1983
COMPARED TO 1982

CONSTRUCTION[1] NOVEMBER 1983	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building						
Percent Change Year Ago	+41.3	+52.5	N.A.	+45.4	+54.9	+ 57.9
Residential Building						
Percent Change Year Ago	+75.2	+79.7	N.A.	+70.1	+89.8	+123.6
Non-Residential Building[2]						
Percent Change Year Ago	+12.9	+36.5	N.A.	+28.5	+17.8	+ 24.0
Total Dwelling Units						
Percent Change Year Ago	+66.6	+76.4	N.A.	+76.7	+77.8	+103.5

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

respective gains of 18.8 and 9.5 percent in the nation. Office building construction totaled $593 million, a gain of 23.5 percent versus a national increase of only 6.8 percent. However, store and industrial building construction underperformed the nation, with store building increasing 19.0 percent versus the national rate of 35.9 percent. Industrial building construction fell 39.6 percent in the Mid-South versus a modest national increase of 5.5 percent.

The revival in consumers' financial positions and in the construction industry made its mark on the financial sector in 1983. Total personal savings nationwide in 1983 were $7.5 billion higher than in 1982. Savings deposits at commercial banks and savings and loans throughout the country rose 120.0 and 73.0 percent, respectively. Net savings flows at Mid-South savings and loan institutions were nearly double their levels of a year ago, and savings deposits at Mid-South commercial banks were 101.6 percent higher than a year earlier. Mortgage loans made by Mid-South savings and loans totaled $6.0 billion in 1983 versus $2.1 billion in 1982, an increase of 185.7 percent, reflecting a much improved residential construction sector in the Mid-South.

Table 5

1983 SAVINGS AND LOAN ACTIVITY AND PERCENTAGE CHANGES FROM 1982

SAVINGS AND LOAN ACTIVITY	Alabama	Arkansas	Louisiana	Mississippi	Tennessee[1]
Mortgage Loans Made (millions)	$831.5	$2,026.1	$2,048.3	$362.5	$774.3
Percent Change Year Ago	+271.5	+254.7	+130.6	+160.8	+150.6
Net Savings Flow (millions)[2]	$663.4	$1,446.6	$2,028.0	$287.0	$687.1
Percent Change Year Ago	+343.4	+354.6	+102.0	+157.6	+253.2

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

Table 6

BANKING: MEMBER BANKS AS OF 12/7/83: PERCENTAGE CHANGES FROM COMPARABLE 1982 PERIOD

FINANCE	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Deposits	+ 9.0	+ 9.6	+ 8.3	+15.3	+ 9.0	+ 9.0	+ 10.0
Demand Deposits	- 1.0	- 0.8	+ 3.0	- 1.6	- 2.0	- 1.0	- 2.0
Time Deposits	- 14.0	- 5.7	- 8.0	+21.8	- 8.0	- 9.0	- 9.0
Savings Deposits	+120.0	+101.6	+95.0	+18.5	+115.0	+201.1	+125.0

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

commercial buildings will be up 12.0 percent, and private hospitals will increase 10.0 percent. On the residential side, single-family units are projected to rise 5.0 percent, with multi-family units increasing 10.0 percent.

The construction industry led other sectors of the Mid-South economy in recovery from the recession. For the twelve months ending December 1983 versus the comparable 1982 period, Mid-South (excluding Arkansas) total building activity increased 47.9 percent, outperforming the national increase of 39.7 percent. Total Mid-South construction employment stood at 304,800 in January 1984, an increase of 20,400 from last January or 7.2 percent, closely matching the national increase of 7.3 percent.

FINANCE

The nation's credit and capital markets are likely to see another and more significant test during 1984. The economy has moved from a recovery phase to the potential for full-scale expansion accompanied by increased demands for capital and credit from businesses and consumers.

Already in the first quarter of 1984 short-term private credit demands are approaching unprecedented levels. Business loans at weekly reporting banks rose $4.6 billion in the first quarter, a rate of borrowing exceeding levels for the first quarter of any recent year. Additionally, the U.S. League of Savings Institutions reported that mortgage lending at savings institutions totaled $11.8 billion in January, a record for the month. Such accelerated growth in borrowing will directly affect the ability of the Federal Reserve to supply funds to the private sector and limit their policy choices for the remainder of 1984.

Total deposits at Mid-South commercial banks were 7.4 percent higher than last January's level but underperformed the national increase of 8.4 percent. Demand deposit growth was a modest 1.6 percent compared to a 5.2 percent increase in the nation. However, the decline in time deposits was below the national rate, while savings deposits rose 68.0 percent versus a 59.3 percent increase in the nation.

LABOR	**United States** (December)	**Mid-South States**				
		Alabama (January)	**Arkansas** (January)	**Louisiana** (January)	**Mississippi** (January)	**Tennessee** (January)
Civilian Labor Force	111,795,000	1,752,700	1,009,200	1,888,600	1,021,900	2,200,100
Percent Change Year Ago	+ 1.2	+ 1.6	+ 1.5	+ 2.0	− 2.4	+ 4.0
Unemployed	8,992,000	236,300	108,400	197,000	112,200	243,500
Percent Change Year Ago	-22.7	-17.6	-15.6	-14.4	-23.9	-17.4
Unemployment Rate						
1984	8.0	13.5	10.7	10.4	11.0	11.1
1983	10.5	16.6	12.9	12.4	14.1	13.9
Non-Agricultural Wage & Salary Employees	92,289,000	1,324,400	750,900	1,560,300	793,000	1,746,800
Percent Change Year Ago	+ 3.3	+ 3.2	+ 6.1	+ 0.6	+ 3.0	+ 5.2
Manufacturing Employment	19,271,000*	344,300	204,900	176,000	209,700	483,000
Percent Change Year Ago	+ 5.9	+ 6.3	+ 9.1	− 3.7	+ 8.4	+ 7.3
Non-Manufacturing Employment	72,373,000*	980,100	546,000	1,384,300	583,300	1,263,800
Percent Change Year Ago	+ 2.7	+ 2.2	+ 5.1	+ 1.2	+ 1.3	+ 4.4
Average Weekly Earnings of Production Workers in Manufacturing	$372.86	$320.25	$297.52	$417.31	$279.16	$311.25
Percent Change Year Ago	+ 8.2	+ 8.4	+ 9.7	+ 6.6	+ 8.8	+ 6.4
Average Weekly Hours of Production Workers in Manufacturing	41.2	40.9	40.7	41.4	40.4	40.9
Percent Change Year Ago	+ 3.8	+ 3.8	+ 3.8	+ 1.2	+ 3.6	+ 3.0
Average Hourly Earnings of Production Workers in Manufacturing	$9.05	$7.83	$7.31	$10.08	$6.91	$7.61
Percent Change Year Ago	+ 4.3	+ 4.4	+ 5.6	+ 5.3	+ 5.0	+ 3.3

***Seasonally adjusted.**

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1] (December 1983)	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building Percent Change Year Ago	+39.7	+50.2	N.A.	+39.9	+47.5	+ 58.3
Residential Building Percent Change Year Ago	+71.1	+81.6	N.A.	+67.6	+72.4	+122.3
Non-Residential Building[2] Percent Change Year Ago	+12.4	+31.8	N.A	+21.5	+19.4	+ 24.4
Total Dwelling Unit Percent Change Year Ago	+61.4	+73.9	N.A.	+72.9	+66.7	+108.9

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

FINANCE (January 1984)	**United States**	**Mid-South States**	**Alabama**	**Arkansas**	**Louisiana**	**Mississippi**	**Tennessee**
Member Banks as of Percent Change from Comparable Date January 4, 1983							
Total Deposits	+ 8.4	+ 7.4	+ 6.8	N.A.	+ 6.4	+ 8.1	+ 8.7
Demand Deposits	+ 5.2	+ 1.6	+ 5.4	N.A.	- 1.4	+ 2.2	+ 2.4
Time Deposits	- 6.6	- 5.4	- 4.1	N.A.	- 5.2	- 6.8	- 5.8
Savings Deposits	+59.3	+68.0	+54.3	N.A.	+71.1	+104.0	+60.1

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY	**Alabama** (January)	**Arkansas** (December)	**Louisiana** (December)	**Mississippi** (December)	**Tennessee**[1] (January)
Mortgage Loans Made (millions)	$41.0	$147.9	$205.8	$ 33.9	$50.3
Percent Change Year Ago	+80.6	+ 58.7	+ 28.5	- 0.6	+ 5.9
Percent Change Year-to-Date	N.A.	+254.7	+130.6	+160.8	N.A.
Net Savings Flow (millions)[2]	$25.5	$113.2	$188.1	$ 32.1	$31.2
Percent Change Year Ago	-64.6	- 44.7	- 19.4	- 36.7	-80.6
Percent Change Year-to-Date	N.A.	+354.6	+102.0	+157.6	N.A.

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

Tennessee's economy ended 1983 with strong momentum. Retail sales were 14.0 percent higher in fourth quarter 1983 than in fourth quarter 1982. Total personal income rose 7.4 percent from third quarter 1982 to third quarter 1983, outperforming the national increase of 6.6 percent. For the year as a whole, sales tax collections were up 7.1 percent, the dollar value of permits for residential construction had doubled, and the Tennessee Department of Economic and Community Development reported a total of $1.5 billion in new projects and expansions undertaken during the year. Tennessee's economy also experienced renewed strength in new incorporations and a decline in the number of bankruptcies.

Data for January 1984 show the momentum continuing. Sales tax collections remain robust, up 11.0 percent from last January. Total non-agricultural employment rose 5.2 percent from a year ago, or approximately 86,100 jobs. Manufacturing employment experienced a healthy gain of 7.3 percent, with all categories of durable goods production registering positive gains. Strong gains in non-durable goods employment were registered in textiles/apparel and printing/publishing. On the non-manufacturing side, solid gains were registered in construction, retail trade, and service employment. Government employment managed a healthy increase of 3,800 jobs from a year earlier. Overall, the total number of person unemployed declined 17.4 percent, with the unadjusted unemployment rate at 11.1 percent, a drop of 2.8 percentage points from last January. All the metropolitan areas of the state experienced declines in their unemployment rates with Nashville the better performer, falling from 10.0 percent last January to the current rate of 7.3 percent. However, thirteen counties continued to experience unemployment rates above 20.0 percent, while only six counties were at 8.0 percent or less.

Total deposits at Tennessee's commercial banks in January 1984 increased 8.7 percent from a year ago, outperforming the national increase of 8.4 percent. Credit union share drafts were up 31.3 percent, and savings and loan deposits rose 32.4 percent above their levels of a year ago. Savings and time deposits across the state increased 5.7 percent from last January. Total loans at Tennessee's savings and loan institutions rose a modest 5.9 percent from a year earlier, while net savings flow continued a strong pace, up 80.6 percent from last January. In addition, the assets of Tennessee's bank holding companies in 1983 were 23.5 percent above their 1982 levels.

Tennessee's index for prices received for all farm products in January 1984 stood at 136.0 of its 1977 = 100.0 level, an increase of 8.8 percent from a year earlier, while the prices paid for agricultural commodities and services, as measured on the national level, rose a moderate 3.8 percent. The recently released *1982 Census of Agriculture* by the Bureau of Census shows Tennessee with 90,568 farms averaging 138 acres per farm. The average value of land, buildings, and equipment was $160,017. In addition, 407 farms were owned by corporations, with 6,079 farms listed as being operated by women.

stipulated that small firms, having less than $150 million in stock held by investors unaffiliated with the company, could not utilize shelf registration procedures.[11] The Commission felt that their smaller size did not justify the need for placing large volumes of securities on the shelf. These smaller companies represent an insignificant part of the shelf registration market.

Shelf registration offers many of the benefits often associated with deregulation. All of the parties involved in the issuance of securities will have to become more effective in the performance of their jobs. This includes investment bankers, corporate financial officers, and institutional investors.

Issuing corporations will be able to move much more quickly to take advantage of an open window in the financial markets. This is particularly important in the highly volatile economic environment of the 1980s.

The counter argument against shelf registration is that the protective nature of the securities legislation of the 1930s is under challenge. The concept of due diligence takes on much less meaning when instant deals are being put together. In this area, the courts may still have something to say.

Ultimately, it will be up to the public and the SEC to determine whether we have lunged forward into more effective ways of doing business in the 1980s or regressed to many of the abuses that preceded the market crash and legislation of the 1930s.

FOOTNOTES

[1] Beth McGoldrick, "Life with Rule 415," *Institutional Investor*, Vol. 17 (February 1983), p. 129.

[2] Ibid., p. 133.

[3] Tim Carrington, "Morgan Stanley, as Lead Manager, Led in Dollar Value of 82 U.S. Underwritings," *The Wall Street Journal* (January 11, 1983), p. 42.

[4] McGoldrick, p. 131.

[5] "Christening Shelf Registration," *Institutional Investor*, Vol. 17 (January 1983), p. 90.

[6] Interview with H. Frederick Krimendahl II, partner, Goldman Sachs, November 25, 1983.

[7] Richard L. Stern, "Lions Want Lion's Share," *Forbes* (November 22, 1982), p. 44.

[8] McGoldrick, p. 129.

[9] *Annual Report of the Securities and Exchange Commission* (Washington, D.C.: U.S. Government Printing Office, 1982).

[10] "SEC Renews Debate Over Use of Shelf Filings," *The Wall Street Journal* (June 10, 1983), p. 12.

[11] Richard L. Hudson, "SEC Votes to Curb Shelf Registrations by Barring Their Use by Smaller Firms," *The Wall Street Journal* (November 12, 1983), p. 2.

MANAGING AN R & D UNIT

*Martin R. Moser**

There always has been a great deal of controversy surrounding the who, what, where, why, when, and how of research and development (R & D) management. According to one point of view[1] which was very popular during the fifties, the best way to manage a research team is to hire a good person and leave him free to produce new knowledge that will eventually be profitable to the firm. This theory has led to the establishment of some central research laboratories directed by distinguished scientists who were left essentially to their own devices.

According to another view,[2] the process of research and development is similar to the other major functions of a firm and, like them, should be subject to rational management.

In recent years there has been some disillusionment with both points of view. Experience has shown that it is not enough simply to hire good people and let them work independently; this approach is apt to result primarily in scientific papers and little else. The second view has important shortcomings too, for unless management recognizes the uncertainties that confront the researcher and the need for innovative solutions to problems, it may try to manage projects in too much detail and with too little flexibility. The job of putting research and new technology to work for corporate goals is a difficult one and may require modifying both the goals and the style of the firm.

Although all management functions must cope with uncertainty, R & D is generally agreed to be the one function involving the largest number and widest range of uncertainties. The R & D manager faces huge problems not only in selecting the most promising avenues for R & D effort and expenditure, but also in attempting to ensure a steady flow of technically feasible projects.

The lengthening time scale of R & D work exacerbates the uncertainty and complexity of this management effort. Today, frequently five to ten years or more may be required to achieve technical success and an additional five to eight years may be necessary to realize full commercial potential.[3]

The Manager's Role in R & D

What is meant by the managerial role in R & D? According to Hower and Orth,[4] the R & D manager must "see that plans are made, that programs are formulated, that proper personnel are recruited, organized, and suitably administered, that activities and resources are coordinated, results evaluated, and so on. This means that administrators, supervisors, executives (call them what you will) are those responsible for seeing that the 'work gets done' rather than directly doing it themselves."

Mueller[5] claims that the C.E.O. holds the key to the R & D management process: for it to succeed, he must be committed to innovation. Of course, parameters must be established for projected new endeavors, but there must also be opportunity for innovations of the serendipitous variety. No real guidelines can be set for these, other than the general principle that the corporate attitude should be sympathetic to nonconformists and divergent thinking.

There is no question of the importance of management's role in successful R & D. But what are the various dimensions of this role? In an attempt to answer this question Margerison[6] formulated questions about specific R & D group composition.

What sort of group are you managing? Let us assume that the members of the group share the same organizational goals even though they may differ over the means to the goals. Is the group homogeneous or heterogeneous? Are the members alike in the way they work, their skills, their background, their ideas, and their approach to the job? If so, then the group could benefit from "a supervisor who stresses innovation, rejects established approaches, offsets pressures toward conformity, and provides original ideas and new types of solving problems."

On the other hand, with a group who is enthusiastic, innovative, and resourceful, the supervisor needs to play a different role. Here he should be more of the catalyst promoting cooperation, encouraging, facilitating the exchange of ideas, helping resolve differences of views, and generally acting as a source point for communication.

Margerison claims that the manager is the key person in innovative groups. He needs to encourage the group to exchange technical information and help each other think through their technical problems, and he should be an active part of the process himself.

What does the manager do to motivate his staff? There has been considerable research to establish what, if any, are the best managerial styles. The answer has come back that it all depends on the type of situation, the technology, and the sort of people with whom you are working. There is no one style to suit all conditions.

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What can the manager do to motivate his team? First, he must get the conditions of service right. It is unlikely that a member of the staff will give his best or produce best, for example, if he is worried about his level of pay, concerned about his pension, or dissatified with the physical conditions. Factors of this sort have been referred to by Hertzberg as the "hygiene" factors. According to Hertzberg, their resolution won't necessarily motivate people, but they are essential preconditions for those factors that do, such as the desire for achievement-recognition, responsibility, advancement and personal growth, as well as the challenge of the work itself. While there is a lot of argument with Hertzberg's two-factor theory, its point is reasonably well accepted. After that there are differences of emphasis.

However, other theorists such as Vroom and Lawler stress the importance of the individual's needs and expectations. They argue that motivation is a function of a person who is interested in specific goals, who believes he can achieve them, and who expects that, when he succeeds, the results will be of some use or value and that he will be rewarded. In short, motivation depends on a person's needs and his belief about the outcome of his effort.

Mansfield[7] notes that there are two sides to the role played by a firm's highest research administrators. They must guide the research in directions that are useful to the organization and at the same time represent the scientists' interests to top management.

At lower levels in the organization a central problem of supervisors is to decide how tight their supervision should be. A study of twenty laboratories of the National Institutes of Health identified three kinds of supervision: "participatory" (high rate of interaction and joint decision between supervisor and researcher), "directive" (low rate of interaction and unilateral decision-making by supervisor), and "laissez faire" (low rate of interaction and little decision making by supervisor). According to the study, research performance was the highest for participatory supervision, intermediate for laissez faire supervision, and lowest for directive supervision.

Frohman[8] outlined five managerial roles in the administrative process of planning, controlling, and appraising R & D:

Gatekeeping: Collecting and channeling information about change in the internal and external environments. Gatekeepers stay abreast of events in their respective environments through personal contacts primarily and through formal media secondarily.

Idea Generating: Analyzing information about technologies, approaches, and procedures and generating new technical ideas, approaches, and/or procedures.

Championing: Recognizing, pursuing, and demonstrating new technical ideas, approaches, and/or procedures for formal management approval.

Project Leading: Integrating and coordinating the diverse sets of tasks and people involved in moving a demonstrated idea into practice.

Coaching: Guiding and developing the less experienced personnel (a big brother/sister role).

Survey findings indicate that individuals tend to be able to perform one or two of the managerial roles well, rather than all equally well. Which role a person performs better than others depends on his experience, skills, and personality characteristics.

The perception of what type of behavior gets rewarded tends to influence which roles are emphasized. Some organizations reward mainly tangible outputs, such as problems solved, new designs, hardware built, and so forth. As a result, less effort than may be desirable tends to be invested in the roles that do not produce tangible results. Frohman claims that top management should insure that the range of behavior recognized and rewarded covers all of the managerial roles, including, for example, effective gatekeeping and coaching, which do not produce direct tangible results.

The administration and control of research and development tends to be looser and more informal than in most other areas of industry. Although there may exist a rather formidable control structure, many of the decisions tend to be made quite informally.

Management Control

According to Clutterback,[9] R & D has traditionally escaped many of the management controls imposed on other corporate functions because of the supposed difficulty of applying them in a creative environment. The atmosphere, however, is changing. Companies are attempting to draw R & D much more into the mainstream of corporate activities by designing productivity and control procedures specifically tailored for their research departments.

The reason is the escalating cost of R & D. Although some considerable increases in productivity in the laboratory have been brought about by the introduction of computers, research remains highly labor-intensive. One estimate, for example, puts salary expenditures on research and support personnel at nearly 60.0 percent of total R & D spending in the U.S. chemicals, instrument, and car manufacturing industries.

The need to meet rigorous government health and environmental requirements is another strain on research resources.

The introduction of management controls into R & D, however, does not have a happy history. A study[10] of R & D productivity at the Hughes Aircraft Company suggests that efforts of research departments to establish management by objectives (MBO), a system in which subordinates agree to goals with their superiors and performance is monitored at regular review sessions, have frequently failed.

One company that has combined managerial control of R & D with successful product innovation is Dexter Corporation. One of the most important R & D control mechanisms Dexter has introduced is its "innovation index."[11] Developed by Glaser, the index is a way of assessing whether a project will succeed, and if not, where its faults are.

Glaser devised the index after analyzing a large number of Dexter's past research projects to isolate common causes of success or failure. He found eight major factors. To each he assigned a numerical weighting. Together, the weightings equal one hundred.

At regular intervals during a research project either Glaser or the responsible divisional head of R & D scores the project on each of the eight factors. If the score is well above 70, the project is almost certain to succeed. If it is much below, it is abandoned or remedial action taken. Glaser's eight factors are as follows:

1. Scientific and technical competence (maximum value 20 points). Are the research workers both adequately skilled and well motivated? Do they have a record of good innovation?
2. Effective communication (maximum value 20 points). Are the technical and marketing people who are working on the project cooperating? Do they understand each other's problems? Are the technical people in constant contact with the customer?
3. Presence of a "champion" (maximum value 15 points). Is there a senior manager who will help push the project through against any opposition or difficulties?
4. Does the project fulfill a real market opportunity? (maximum value 15 points)
5. Is there a real opportunity for technical innovation? (maximum value 10 points)
6. Top management interest (maximum value 10 points). Is the company sufficiently committed to the project to provide it with the resources it needs?
7. Competition (maximum value 5 points). Are the competitors working on similar projects of their own? Competition can be a spur. The tougher it is, the higher the score.
8. Timing (maximum value 5 points). How much lead time can be gained over competitors? Is the market ready for the product?

Dexter's innovation index, however, is concerned only with monitoring existing projects that have already been sanctioned by senior management. It cannot help in assessing a company's overall R & D effort.

Balachandra and Raelin[12] have developed a method of predicting project success in high-tech industries. These researchers have developed a procedure which consists of responding yes/no to a series of twelve questions. The higher the number of "yes" responses received by a project, the greater the likelihood of its being successfully completed. The twelve questions are:

1. Are new products introduced in this line fairly regularly (once in six months or less)?
2. Is the estimated completion time longer than two years?
3. Is the product in the growth phase of its life cycle?
4. Is the probability of successfully completing the project increased in the last month?
5. Is the technological route well understood?
6. Is there a high degree of association between the commercial and technical aspects of the project?
7. Are the cost schedules met at least 80.0 percent of the time?
8. Is the number of alternative end uses for the product becoming smaller?
9. Is there an increase in internal competition for resources of the project?
10. Is there an increase in commitment of project workers?
11. Has the project manager been effective in handling the project?
12. Has the top management support of the project increased?

According to Balachandra and Raelin, if a project receives more than nine "yes" responses, it should be continued unless there is some major unseen factor. For scores between six and nine a review is called for. Projects with scores less than six need an intense review and possible termination.

In research, but not development, it is generally believed that administrators should resist the temptation to manage projects in much detail. Management's job should be limited to providing general guidelines and goals, selecting capable persons, and providing a climate conducive to good work. This does not mean that management does not—and should not—guide research. Whereas over-management of research is likely to lead to technical hack work, totally unguided research is likely to lead to waste and frustration. A balance must be achieved. Management must learn to guide research in the directions most likely to contribute to company goals, yet not constrain it so that it produces excessively narrow and short-range work. Moreover, each company must decide, in the light of expected scientific and commercial development, the scientific areas where it will concentrate its efforts, those where it will merely keep in touch with the scientific community, and those where it will virtually ignore developing knowledge.

The Tension Between the Manager and the Scientist

Management is interested in speedy, low-cost production of a marketable product but is often uncertain how to communicate to its research scientists its need for essentially applied rather than theoretical research. On the other hand, the scientist often fails to persuade management that his research should not be cut, and that his work cannot be subjected to the same type of cost-effectiveness studies and manufacturing standards as are applicable to production departments.

The tension that may arise between the traditions and values of management on the one hand and science on the other has received considerable attention. The scientist comes from a tradition where he is privileged to choose his own topics of work, the objective is new knowledge, and his performance is evaluated by his peers and colleagues in science. On the other hand, management operates in a tradition of passing on, specifying, and executing decisions made by others, the objective is to make money, and evaluation is done by hierarchical superiors.

McLeod[13] notes that this issue of basic versus applied research expresses the underlying communication problem between professional scientists on the one hand and business or industrial management on the other. Professional science favors contributions to knowledge, per se, not to profits; high-quality research rather than low-cost research; long-range planning rather than short-term results. These characteristic values may be seen to have their origin in the academic atmosphere where scientists are trained. Most of the very best scientific researchers are products of those universities which, because of their large endowments and continuous governmental funding, have long funded research of no apparent immediate application. One might even suggest that it is this environmental background that has caused the scientist's communication problem, for it has given him expectations that are not likely to be met in the ordinary industrial laboratory or in the business milieu, and it has ill-equipped him to communicate these expectations to management.

The academic institution traditionally provides an atmosphere of free inquiry and fosters dedication to the pursuit of knowledge for its own sake. The scientist who enters industry finds little of this freedom. He may have been led to expect that his relationship to management would be that of a colleague rather than of any employee, but once he is hired, he begins to appreciate the delicacy of this role. An acculturation process takes place as the laboratory and the recruited scientist learn from each other and change each other. Some people believe that the laboratory effects more change in the scientist than vice versa.

There is little doubt that scientists in business and industry realize that certain character traits, such as originality, imagination, freedom of expression, and intellectual stimulation which the university-oriented scientist maintains as part of his value system, are discouraged in the corporate community. The extent of professional frustration among these scientists is revealed in a study by the Opinion Research Corporation[14] of 600 scientists and research engineers in six large firms. Only 34.0 percent reported that they were "very well satisfied." The most frequent case of job dissatisfaction was that "special competencies were not utilized." That is, there was a distinct feeling that the corporate scientist was not fully accepted as a bona fide contributor to the corporate well being.

According to Mansfield,[15] top management's ultimate control over the scope, emphasis, and efficiency of research lies largely in the selection of key personnel. It is the responsibility of management to decide in what broad fields to do research, and then to staff the program accordingly. Within these fields, they should rely heavily on the judgment of researchers to select specific inquiries and particular approaches to problems.

Mansfield claims that top management should play a more dominant role in development, partly because there is less uncertainty than during the research process. Management can define the problems and goals of development more closely and can achieve a better correlation between resources utilized and ultimate results. In addition, management must concern itself with the cost of development. If a project proceeds beyond the exploratory stages, its costs begin to increase considerably. Moving from a design study to the later stages of development work typically involves greater labor requirements for working out and testing the details of the design.Testing the full system can involve considerable expense, particularly when the production of test items requires many special tools and buildings.

He notes that although the management of research and development is far from a science, and that few propositions are testable, and practically none are tested in any formal way, some worthwhile observations appear in the literature:

1. A company's research aims should be clearly spelled out and communicated to the scientists, and its research should be undertaken in broad areas relevant to its economic goals. If one simply hires teams of scientists and allows them to do research in their favorite fields, their results may be novel and interesting but they are unlikely to have much more commercial value to the company. There is a much greater chance of obtaining commercially useful results if the firm's research aims are specified and researchers are hired who offer a good match, as to both qualifications and interests, with these aims. It is surprising how frequently firms seem to lose sight of this seemingly obvious point.
2. Top management's responsibilities do not end with the definition of the objectives of research and development. Management must also make sure that its organization performs critical planning functions. Research and development should be responsive to technological knowledge flowing from three sources: the company's competitors, the company's present and prospective customers, and the scientific community in general. Despite the difficulties in technological forecasting, the firm must try to forecast, as best it can, the new developments that will come from these sources. Some firms make rather informal forecasts, while others have developed formal procedures to forecast technological threats and opportunities.
3. Management must pay proper attention to the transfer of new technology into operations. This is sometimes an extremely difficult task. On the one hand, this transfer may be restricted because the researcher does not recognize the commercial implications of his work or will not release his findings until he has covered all of his scientific ramifications. On the other hand, operating groups sometimes resist new technology on the ground that it is impractical or because, although it is desirable in the long run, it will add to their short-term marketing or engineering costs.
4. Managers, particularly in the case of large military and space projects, tend to underestimate the uncertainties involved and not maintain enough

flexibility or settle too quickly on a particular design. When there is considerable uncertainty, it often pays to proceed sequentially, maintaining flexibility and using the experience that is gained to reduce the margin of error.

5. It is important to prevent isolation of research from development. In a company where this is the case, the research people may be divorced from practical applications and their work may have little practical value. On the other hand, if no line is drawn between research and development, the program may become dominated by short-term, product-oriented projects, and the exploration of fundamentally new areas may be neglected.
6. A reasonable limit should be placed on the amount of "firefighting" activities done by researchers. In most companies, management tends to value technical service to customers and to companies' manufacturing divisions as one of the most important products of its technical groups. Sometimes management feels that whenever an emergency call comes in, longer range R & D projects can be dropped temporarily. Too much work of this sort produces resentment among scientists and engineers and hinders production of important new ideas.
7. It is important for the R & D department to recognize that it is only one of many sources of new ideas. There is sometimes a tendency for R & D managers to become overly self-centered and to focus too much attention on new developments within their own laboratories while neglecting developments in other firms and industries or ideas offered by other departments of their own firms.

Conclusions

Although the exisitng literature regarding the effects of various managerial, organizational, and other factors on the productivity of an industrial R & D facility is somewhat limited, certain basic conclusions emerge:

— Scientists, engineers, and researchers should be given a high degree of autonomy. The overall program and research goals of the organization must be kept in focus, but, within reasonable limits, the scientist should be allowed to plan his own work as well as to choose and change projects.

— Management should recognize the professional status of the scientist. For example, research personnel should be consulted about plans or proposals which will affect their work. Compensation and organizational status should also reflect the importance and professional nature of the scientist's position.

— The scientist and engineer should be encouraged to engage in independent and creative thinking. A procedure should be set up where adequate reception and consideration of new ideas is always available. Negative or even neutral treatment of new ideas will probably result in a slowdown in productive thinking.

— Rigid rules and regulations in regard to appropriate behavior should be avoided. Non-conformists—people who like to work in the middle of the night—should be tolerated as long as the resulting disruptions remain within reasonable bounds. Unnecessary rigidity will result in resentment and lower productivity. An absence of rules and regulations, on the other hand, will result in a lack of direction. A balance should be sought in order to achieve maximum levels of satisfaction and performance.

Who is the ideal person for the job? A group of R & D managers was asked the following question: "If you had to fill a management position in your unit and you were forced to choose between two people, one having bench experience but no management experience and the other having management but no bench experience, who would you choose?" Half of the respondents chose the first person; the remaining picked the second. It seems that the best ingredients for an effective R & D manager are some combination of field experience, management training, and a creative instinct.

FOOTNOTES

[1] M. B. McLeod, "The Communication Problems of Scientists in Business and Industry," *Journal of Business Communication*, Vol. 15, No. 3, Spring 1978, pp. 27-35.

[2] *Ibid.*

[3] H. D. Balthazar, R. A. Boscht, and M. Menke, "Calling the Shots in R & D," *Harvard Business Review*, Vol. 56, No. 3, May-June 1978, pp. 151-160.

[4] R. M. Hower and C. D. Orth, *Managers and Scientists* (Cambridge, MA: Harvard University Press, 1963), p. 7.

[5] R. K. Mueller, *The Innovation Ethic* (New York, N.Y.: AMACOM, 1971), pp. 11-12.

[6] C. Margerison, "Managing the R & D Group," *Management Decision*, Vol. 16, No. 1, 1978, pp. 52-63.

[7] E. Mansfield, *The Economics of Technological Change* (New York, N.Y.: W. W. Norton and Company, 1961), p. 82.

[8] A. L. Frohman, "The Performance of Innovation: Managerial Roles," *California Management Review*, Vol. 20, No. 3, Spring 1978, pp. 5-12.

[9] D. Clutterback, "R & D Under Management's Microscope," *International Management*, Vol. 34, No. 2, February 1979, pp. 18-22.

[10] *Ibid*

[11] *Ibid.*

[12] R. Balachandra and J. A. Raelin, "Predicting R & D Project Success in High Tech Industries," *The Proceedings of the Ninth Annual Conference of the New England Business and Economic Association*, November 5-6, 1981, University of Lowell, Lowell, Masschusetts, pp. 15-17.

[13] McLeod, pp. 27-35.

[14] *Ibid.*

[15] Mansfield, pp. 78-79.

DEREGULATION OF PIGGYBACK: ITS IMPACT ON THE MEMPHIS RAILROAD INDUSTRY

*Thomas G. Ponzurick and R. Neil Southern**

Introduction

Memphis is being strongly promoted by its Chamber of Commerce and the Memphis Uniport Association as "America's Distribution Center." According to statistics provided by *Handling and Shipping Management* magazine, Memphis has moved from 22nd in 1975 to 6th in 1980 on the list of major distribution centers in the United States (*Handling and Shipping Management*, 1980). The major factor contributing to this growth is Memphis' central location, which has enabled it to become the largest medium-sized airline hub city in the nation. As a river port, Memphis is second only to St. Louis in tonnage handled each year. In trucking, it is a major hub served by many of the nation's largest carriers, as well as numerous smaller regional and local trucklines. And in terms of rail transportation, Memphis is the third largest east-west rail center in the country. According to the *Journal of Commerce*, almost 100 trains arrive and depart from Memphis each day, generating jobs for about 3,000 employees with a Memphis payroll of approximately $54.0 million (*The Journal of Commerce*, 1981).

The purpose of this article is to focus on one major component of Memphis' distribution system, one which has continued to grow in spite of adverse economic conditions. This component, Trailer on Flat Car (TOFC or more popularly known as piggyback), now ranks second in terms of railroad carloadings with a 10.4 percent share of total cars loaded (coal carloadings remain number one, with a 26.6 percent share of total rail cars loaded). Despite the recent recession and the fact that total rail freight traffic increased only 3.5 percent in 1983, piggyback showed an increase of 21.9 percent nationally. This increase is particularly impressive in view of the fact that 20 of the 21 major rail commodity groups declined in number of cars loaded during 1982 (*Rail News Update*, 1984).

Why the success of piggyback? After all, most commodities shipped by piggyback are the same products whose consumption is affected by the economy, and the past history of TOFC reflects considerable susceptibility to fluctuations in the economy. "What accounts for this change from past patterns—patterns in which the economy sneezed and piggyback suffered a nosebleed?" (*Railway Age*, 1982). We believe that recent piggyback success is a result of the March 1981 Interstate Commerce Commission (ICC) decision exempting piggyback freight from economic regulation (Harper, 1982).

It is apparent that this exemption has been a vital stimulant, increasing awareness of intermodal possibilities and opening up the marketplace. Shippers, the individuals responsible for the purchasing of transportation service, seem to agree with this assessment. "To them, piggyback volumes have increased for two main reasons: rates have come down and service levels have gone up" (*Railway Age*, 1982). We believe both reasons have resulted from the exempt status of piggyback freight movements. In effect, the ICC exemption has encouraged railroads to work in conjunction with trucking companies, as well as to compete more effectively with them for freight movements.

The primary purpose of this article is to discuss how ICC deregulation of piggyback has affected Memphis area railroads. First, however, let us review how the piggyback concept operates, i.e., the various piggyback plans, and review briefly the recent history of piggyback service.

Piggyback "Plans"

The railroads in recent years have been very sensitive to their critics, who have accused them of having little imagination and no marketing sense. Piggyback is the primary answer to this criticism. Aggressive measures have been taken to improve service, attract new business, and achieve a more favorable traffic balance and better car utilization.

In the area of piggyback in particular, the railroads have been extremely innovative. They have aimed their marketing efforts not only at the shipper, but also at third parties such as motor carriers, freight forwarders, consolidators (shippers' agents), and shippers' associations. In doing so the railroads have attempted to provide "plans" for almost any customer need. The following is a sample of the "plans" available:

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PLAN I is exclusively for motor carriers. It involves the rail movement of trailers or containers owned by motor carriers, with shipments moving on one bill of lading and billing done by the motor carrier. This plan accounts for approximately 10.0 percent of total piggyback freight.

PLAN II provides door-to-door service by railroads using their own trailers or containers. Tariffs are similar to those of motor carriers. This plan also accounts for approximately 10.0 percent of total piggyback freight.

PLAN II-1/2 provides for ramp-to-ramp service, with shippers (including freight forwarders or motor carriers) performing the pick-up and delivery service. Modified versions of this plan call for railroad pick-up or delivery, but not both. This is the most popular of the various plans, representing approximately 50.0 percent of total piggyback freight.

PLAN III provides ramp-to-ramp rates based on a flat charge, regardless of the contents of trailers or containers which are supplied by shippers, including freight forwarders and motor carriers. No pick-up or delivery is performed by the railroads. This plan accounts for approximately 15.0 percent of total piggyback freight.

PLAN IV is basically for freight forwarders. It requires the forwarders to furnish either an owned or leased trailer or container plus flat car. The railroads charge a flat rate for loaded or empty car movements, furnishing the power and rails. This plan accounts for approximately 10.0 percent of total piggyback freight.

PLAN V covers traffic moving generally under joint rail-motor services or other coordinated rail-motor arrangements. Either mode may solicit traffic for through movements. This plan accounts for approximately 5.0 percent of total piggyback freight (Association of American Railroads, 1983).

Piggyback: Trend Or Fad

Is TOFC the wave of the future or is it a passing fad? This is a question posed by many shippers, who question the railroads' commitment to this form of transportation—a commitment that has been lacking during the past several decades (*Railway Age,* 1982). A review of the history of piggyback operations reveals that, although conceived in 1926, this transportation concept did not begin to grow in volume until the 1950s. "Initial success did not last, however, as outdated regulation and the rapid expansion of the Interstate Highway System limited growth and caused market share to drop from 12.0 percent in the 1960s to 4.0 percent during the 1970s" (Booz, Allen, and Hamilton, 1980). As a result, railroads hedged on their commitment to piggyback service, concentrating instead on the traditional boxcar market.

Recent events have changed this situation though, in particular the increased cost of fuel and government actions on regulation—both events making piggyback more cost competitive today. "This has generated a new excitement and image for TOFC, leading one to believe this is a well entrenched industry" (Abruzzese, 1981). The facts and figures are promising. In 1971, 2,203,530 trailers and containers were loaded for piggyback service. In 1982, this figure was 3,385,172, an increase of more than 53.0 percent (*Yearbook of Railroad Facts,* 1982). Figures for the first three quarters of 1983 indicated that piggyback traffic is up more than 20.0 percent from the 1982 figures and represents the railroads' fastest growing segment of business (*Wall Street Journal,* October 20, 1983). These figures are impressive in view of the fact that they have occurred during a depressed economic period (see Table 1).

Table 1
PIGGYBACK LOADINGS

Year	Trailers and Containers
1961	902,260
1962	1,139,260
1963	1,294,090
1964	1,455,523
1965	1,664,929
1966	1,912,419
1967	1,983,793
1968	2,419,217
1969	2,497,586
1970	2,363,200
1971	2,203,530
1972	2,407,034
1973	2,758,044
1974	2,752,825
1975	2,238,117
1976	2,538,318
1977	2,850,231
1978	3,177,291
1979	3,278,163
1980	3,014,864
1981	3,102,764
1982	3,385,172
1983	Estimated 20% Increase

Source: Adapted from figures provided by the *1982 Yearbook of Railroad Facts* and the *Wall Street Journal,* October 20, 1983.

Effective March 23, 1981, the Interstate Commerce Commission exempted from regulation all rail and truck service provided by railroads in connection with domestic and international piggyback movements. In Ex Parte 230 (Sub 5), the ICC said its decision was based on findings that regulation of piggyback is not necessary to carry out transportation policy or to protect shippers from abuse of market power by the railroads. The ICC stated that exemption from regulation would "likely stimulate improvements in service without threatening any harm to individual shippers" (Interstate Commerce Commission, 1980).

To what extent have Memphis railroads been affected by piggyback deregulation? To gain a better understanding of this question, a study of the railroads serving Memphis was undertaken. The study was intended to determine what effect the granting of exempt status has had on the Memphis area piggyback business. In other words, has the TOFC exemption been a help or hindrance to the Memphis rail industry?

Methodology

A census was taken of the six on-line railroads serving the Memphis area. Only on-line companies (as opposed to off-line) were chosen for the following reasons: (1) local ramp operations have a direct impact on the Memphis community; (2) the respondents could more readily separate Memphis sales from sales in other cities and areas of the country. This eliminated much of the overlap that could exist between competing in-house operations, as well as presented a more accurate picture of the Memphis market. For these reasons, off-line railroads, operating through sales offices and/or representatives in the Memphis locale, were not included in the sample population.

The following railroads were interviewed by telephone: (1) Burlington Northern Railroad; (2) Illinois Central Gulf Railroad; (3) Missouri Pacific/Union Pacific Railroad; (4) L&N/Seaboard/Chessie System; (5) Southern Pacific/Cotton Belt; and (6) Norfolk Southern Railway. It is interesting to note that the six railroads serving Memphis are the top six out of seven railroads in the country (only Conrail does not serve Memphis). These six railroads' freight revenues for 1981 were more than 75.0 percent of the total for all Class I railroads in the country (Foster, 1983).

The telephone method of survey was chosen to insure a 100.0 percent response rate and to answer questions the respondent might have about the subject material. In each case the respondent contacted was a railroad executive responsible for the operation of piggyback services. This was done to insure knowledgeable responses to the questions asked.

A structured questionnaire was designed to direct the questioning and insure reliability and validity of the process. At the conclusion of the specific questions, an open-ended conversation allowed the respondent the opportunity to express thoughts and opinions about the exempt status of TOFC and its future direction.

Results

The results of the study may be expressed in terms of four specific areas: volume, rates, profitability, and revenues. The following changes were reported to have occurred since piggyback freight was granted exempt status:

All respondents stated that their firms showed an increase in the volume of Memphis piggyback carloadings since the Interstate Commerce Commission made its deregulation decision. Most respondents reported an increase of 10.0 to 20.0 percent per year.

Rates, in the meantime, showed a steady decline during this period, with most railroads reporting a decrease in both national and local rate structures. The exact percentage of decrease was difficult to ascertain due to the fact that rates are now set primarily on an individual basis through separately negotiated contracts with each shipper. When pressed, however, the respondents estimated that a 20.0 percent decrease in rates could be considered the overall average, both nationally and in the Memphis market.

Estimates of the profitability of piggyback traffic were also difficult to determine, but all respondents indicated that the increase in volume had at least offset the decrease in rates. Of those reporting improved profitability, 6.0 to 8.0 percent was given as the increased level of profits achieved since the ICC's deregulation decision.

With regard to revenues, most respondents reported substantial increases with averages ranging between 12.0 and 15.0 percent. An interesting sidelight to this issue was that one respondent estimated TOFC revenues to be increasing at a rate of 14.0 percent locally, while nationally the firm was decreasing at a rate of 3.0 percent. This bodes well for the strength of piggyback traffic in the Memphis marketing area.

Opinions, Thoughts And Comments

The last portion of this study, as alluded to earlier, included an open-ended discussion of the subject matter. The respondents were asked their attitudes and feelings about the TOFC exemption. Overall, the responses were quite positive, leading to the impression that the railroads are pleased with the flexibility they are now allowed to exercise. The most frequently mentioned positive aspect of this new-found flexibility was the elimination of the 30-day ICC waiting period for the approval of a proposed rate change. Under deregulation, rates now may be changed on the spot by telephone.

Respondents also expressed favorable attitudes toward the allowance of deregulated contract rates in that railroad piggyback service can now more readily compete with the motor carrier industry. This may be illustrated by the recent introduction of a citrus fruit piggyback unit train by one firm. This reintroduces the railroads' ability to compete in the $300.0 million perishable market, a transportation market previously dominated by trucking firms.

It is interesting to note that much of the piggyback selling effort is not done by the railroads directly. Rather, intermodal consolidators are handling a major portion of the sales responsibilities. The respondents pointed out that using "wholesalers" is extremely beneficial for all parties concerned, and this accounts for the increased use of consolidators in their sales networks.

All of the comments concerning deregulation were not positive, however. On the negative side of the ledger, the respondents pointed to the required cancellation of interline joint rates. As a result, the railroads may no longer work in conjunction with each other as easily as they did in the past when interline joint rates were controlled by the ICC. This has resulted in a less cohesive freight interchange system. Also causing some concern among the respondents is the fact that boxcar freight has decreased while piggyback shipments are showing an increase. This leads to speculation that TOFC is diverting boxcar freight rather than long-haul motor traffic. It was noted, however, that it is too early to tell if this is actually the case.

One final note of pessimism pertains to the volatile state now being experienced by the railroad industry. That is, deregulation has created a system in which a flood of day-to-day activities makes future planning extremely difficult. However, it was pointed out that stability should be achieved as rate structures develop over the long run. All in all, the open-ended discussion with the respondents may be summarized by stating that the overall attitude possessd by Memphis piggyback railroad executives is one of considerable optimism toward the exempt status of TOFC.

Conclusion

In March 1981, the Interstate Commerce Commission granted exempt status to trailer on flat car service. In doing so, it anticipated that the decision would expand the use of this form of transportation. The news of this exemption was received favorably by the railroad industry, as it optimistically set about the task of making piggyback a viable entity in our national transportation network. It may sound a bit odd, having two competing modes, rail and truck, working with rather than against one another. However, this is the case and rightly so. After all, piggyback takes advantage of the efficiencies of both modes—the flexibility of trucking and the long-haul cost effectiveness of railroads. As Donald V. Harper points out, the positive energy consequences of using truck-rail-truck transportation instead of all truck transportation are obvious and can be very important to the United States if TOFC is conducted on a large scale. A critical energy shortage in the country could eventually bring an end to long-haul truck transportation, with TOFC being substituted (Harper, 1982). These words were echoed by one of the study's respondents, who stated that the TOFC exemption will force railroads and motor carriers to work together in order to survive and prosper in the future.

It was the purpose of this study to determine the degree of change experienced in the Memphis piggyback market since exemption from regulation was granted in 1981. The results show that the volume in TOFC carloadings has increased substantially, while rates have declined. More importantly, there has been an increase in profitability.

These results indicate that the railroads are, indeed, making a strong bid to retain their prominent role in transportation, and that deregulation has had a positive impact on the Memphis railroad industry.

REFERENCES

Abruzzese, Leo. "Revitalized Railroads Are Primed for Piggyback," *Commercial Car Journal*, January, 1981, 87-95.

Becker, H. J., and Liz Jedenic. "Where the Distribution Centers Are," *Handling and Shipping Management*, November, 1980, 52-56.

Beier, F. J., and S. W. Frick. "The Limits of Piggyback: Light at the End of the Tunnel," *Transportation Journal*, Winter, 1978, 12-18.

Booz, Allen, and Hamilton, Inc. "Piggyback: The Efficient Alternative for the 80's," report for Transamerica Interway, Inc., New York, 1980.

"City is Third Largest East-West Rail Center," *The Journal of Commerce*, June 8, 1981, New York, 8.

Foster, Thomas A. "Financial Profile—Railroads," *Distribution*, August, 1983, 66-72.

"Freight Drop Charged to the Economy," *Rail News Update*, Association of American Railroads, January 12, 1983.

Harper, Donald V. *Transportation in America: Users, Carriers, and Government*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1982.

"How Strong is the Commitment to Piggyback," *Railway Age*, April 26, 1982, 26-27.

Interstate Commerce Commission. Ex Parte Number 230, Sub. 5, "Improvement of TOFC/COFC Regulation," 45 Fed. Reg. 79123, 1980.

Lambert, Douglas M., and James R. Stock. *Strategic Physical Distribution Management*. Homewood, Illinois: Richard D. Irwin, Inc., 1982.

"Moving It: Freight Transportation is Changing in the Deregulation Era," *The Wall Street Journal*, October 20, 1983.

Nellis, J. F., and W. W. Weart. "Will Intermodal Make It Big?" *Railway Age*, April 24, 1978, 30-31.

"New Peaks for Piggyback," *Railway Age*, October 30, 1978, 22-25.

"Railroads and Regulation: The Imperative Need for Change," a report by Richard J. Barber Associates, Inc., Washington, D.C., 1979.

"1983 Rail Traffic Surpasses 1982 Mark," *Rail News Update*, January 11, 1984, 1.

"Statistics of Railroads of Class I in the United States," *Association of American Railroads*, November, 1980, 6-7.

Welty, Gus. "Intermodal Technology: The Competition Heats Up," *Railway Age*, April 26, 1982, 15-16.

Welty, Gus. "Piggyback's Potential for Perishables," *Railway Age*, January 8, 1979, 30-32.

Yearbook of Railroad Facts, Association of American Railroads, September, 1982, 3-27.

A PRELIMINARY EVALUATION OF THE 1983 SOVIET SEED COTTON HARVEST

*Francis M. Stackenwalt**

For the second straight year, adverse weather conditions caused the Soviet Union to fall short of its seed cotton production targets. In 1982, heavy rainfall at the height of the harvest in October played a critical role in reducing seed cotton outturn to 9.284 million metric tons.[1] In 1983, torrential rains and hail in April and May resulted in considerable damage to freshly sown fields, necessitating the reseeding of much acreage. Kirgiziia, which again did not meet its target, reported in early June that 77.0 percent of its acreage was resown.[2] Uzbekistan, which barely made its plan goal, reworked about 30.0 percent of its fields, or roughly 550,000 hectares.[3] Tadzhikistan, which also failed to match production with goals, encountered similar problems, at one time reporting that 16,000 hectares were resown in one week alone.[4] While newspaper accounts in August claimed that initial growth lags had been overcome, final 1983 production statistics reveal that these claims were premature and overly optimistic. Uzbekistan, for example, was confident at the start of the harvest that its 6.0 million ton counterplan target would be met.[5] However, the republic in the end exceeded its state plan target by a meager 1,000 tons. As the following table shows, only Uzbekistan, Turkmeniia, and Azerbaidzhan fulfilled state plans. Tadzhikistan incurred a 19,500 ton deficit, and Kazakhstan and Kirgiziia, which have yet to publish output data, are suspected of harvesting only a small fraction of their assigned tonnage.

Table 1
1983 SEED COTTON STATE PLAN TARGETS AND PRODUCTION BY REPUBLIC
(in metric tons)

.Republic	State Plan	Production
Uzbekistan	5,930,000	5,931,000
Turkmeniia	1,230,000	1,241,400
Tadzhikistan	900,000	880,500
Azerbaidzhan	695,000	845,800
Kazakhstan	345,000	n.a.
Kirgiziia	131,000	n.a.
Total USSR	9,231,000	9,200,000

Source: *Cotton Outlook* (10 February 1984).

The total USSR production statistic of 9.2 million tons, an obviously rounded convenience for mass circulation purposes, remains the only gross outturn figure so far published by the Central Statistical Administration.[6] Thus, actual production probably lies somewhere between 9.15 and 9.2 million tons. Aggregating the verified outputs of the first four republics listed in the table gives a first approximation of 8,898,700 tons. Adding Kirgiziia's sole reported statistic of 35.0 percent to plan target, or 45,850 tons, yields a second subtotal of 8,944,550 metric tons.[7] The 225,500 ton difference from the published gross harvest total must be very near Kazakhstan's final outturn.

As the harvest proceeded this season, an additional concern, besides slow maturation rates, arose causing much anxiety among Soviet cotton specialists. By mid-September, both the national and republican presses began complaining of faltering daily harvest rates in the Central Asian republics, a complaint echoed repeatedly during the remainder of the harvest. Tadzhikistan reported on October 2 that state purchases of seed cotton were one quarter less than made on that date in 1982.[8] Uzbekistan in 1983, compared with 1981 and 1982, was two weeks behind in registering the 5.0 million ton benchmark.[9] Similarly, daily rates in November 1982 for the Tadzhik republic averaged between 0.6 and 0.7 percent of state plan; in the same month in 1983 they fluctuated between 0.2 and 0.3 percent. Russian authorities attributed the low daily rates to harvest equipment disrepairs. Tadzhikistan claimed during the first week of October that a mere 25.0 percent of its combines were operational.[10] Uzbekistan for that week could place just 93.0 percent of its machinery in fields, and Turkmeniia reported that it had 1,300 less combines running than during the previous year.[11] Only Azerbaidzhan, which was the first republic to announce making its state plan, consistently reported acceptable daily rates, crediting satisfactory work records of farm repair and maintenance crews.[12]

Since dry weather prevailed well into December, the sluggish harvest tempo did not seem to detrimentally affect final outturns. In fact, it may even help improve quality. The Soviet press has yet to cite these below norm rates as a factor in this year's poor harvest but has, instead, persistently alluded to the unfavorable spring start when mentioning the 1983 crop. These rates suggest two

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conclusions. First, they point out the necessity to develop faster-ripening cotton varieties which would lessen weather-related risks associated with late sowing starts and extended harvest schedules. In other words, faster-ripening hybrids would increase the chances for greater production stability from year to year.[13] Second, they underscore the need to manage and monitor maintenance operations at the farm level better than is being done at present. The combination of 1982-like weather conditions during harvest time and 1983-like low daily picking rates could engender a significant production disaster. Needless to say, maintenance progress reports and daily harvest rates will have to be closely scrutinized in 1984 and beyond for forecasting expected final production results. Gross seed cotton targets for 1984, like the previous year, continue the recent retrenchment policies first observed in 1982. This year's targets are only modestly above 1983's and significantly below the actual production levels achieved in 1980 and 1981 of 9.962 and 9.636 million tons, respectively.[14] Until additional information appears in this year's agricultural journals, assuming that it will, little more can be said about the 1983 harvest. Likewise, the precise reasons for the recent downturn in cotton targets are varied and complex, a subject begging research, but in general are chiefly a function of soil deterioration, declining farm labor productivity, and cotton qualitative problems.

Table 2
1984 SEED COTTON STATE PLAN AND COUNTERPLAN TARGETS BY REPUBLIC
(in metric tons)

Republic	State Plan	Counterplan
Uzbekistan	5,965,000	5,980,000
Turkmeniia	1,240,000	1,241,000
Tadzhikistan	900,000	910,000
Azerbaidzhan	765,000	770,000
Kazakhstan	340,000	345,000
Kirgiziia	90,000	91,000
Total USSR	9,300,000	9,337,000

Source: *Cotton Outlook* (10 February 1984) and *Sovetskaia Kirgiziia* (3 February 1984).

FOOTNOTES

[1] *Narodnoe Khoziaistvo SSSR v 1982g*, 215.

[2] *Sovetskaia Kirgiziia* (8 June 1983).

[3] *Pravda vostoka* (6 June 1983).

[4] *Kommunist Tadzhikistana* (25 May 1983).

[5] Counterplan targets are formulated by each of the cotton republics themselves and are an expression of their "socialist responsibility" to exceed centrally derived state plan goals.

[6] *Pravda* (29 January 1984).

[7] *Sovetskaia Kirgiziia* (22 November 1983).

[8] *Kommunist Tadzhikistana* (2 October 1983).

[9] *Pravda vostoka* (29 October 1981 and 12 November 1983).

[10] *Kommunist Tadzhikistana* (2 October 1983).

[11] *Pravda vostoka* and *Turkmenskaia iskra* (2 October 1983).

[12] *Bakinskii rabochii* (13 October 1983).

[13] The need was emphasized in the resolution "Measures for Further Raising the Effectiveness of Argicultural Science and Strengthening Its Ties with Manufacturing." See *Current Digest of the Soviet Press* (36)XXVIII, 6-7.

[14] *Narodnoe Khoziaistvo SSSR v 1982g*, 215.

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THE ECONOMIC IMPACT OF THE MEDICAL COMMUNITY: A MEMPHIS CASE STUDY

*Howard P. Tuckman and Cyril F. Chang**

The number of articles written in the medical economics area has grown rapidly in the last two decades.[1] At least three factors help explain this burgeoning literature. First, from 1960 to 1982, health care expenditures rose from 5.3 percent to 10.5 percent of GNP.[2] This explosive growth has focused a substantial amount of attention on how the costs of medical care can be kept down. Second, rising input costs and stricter government and third-party regulations have increased the pressure on medical institutions to find ways to produce and deliver health care more efficiently. This concern has been reflected in the recent adoption of a prospective hospital reimbursement system known as Diagnosis Related Groups (DRGs) which is likely to further heighten interest in efficiency. Third, competition from minor emergency clinics, for-profit chains, and alternative health care providers has challenged the market dominance of traditional institutions, forcing them to rethink their ideas about how to organize production.[3] This has increased the need for better information on the economics of health care. Finally, a substantial body of research has been financed by federal agencies such as the National Center for Health Research and the Health Care Finance Agency. This has led to the growth of a body of trained economists interested in exploring medical economics issues.

Interestingly, despite the prolific expansion of this new literature, little attention has been paid to the impact of medical communities on the local economies in which they are located. In part, this is because those persons engaged in dispensing services are too busy to write about the economic impacts of their work. In part, too, it reflects the difficulties inherent in gaining information on the direct and indirect impacts of the medical community.

This article makes a first step toward identifying and quantifying the major impacts a medical sector has on the community in which it is located. The figures presented here do not measure all the effects that an active medical sector may have. Nonetheless, they provide a useful first step toward identifying the direct effects that should be taken into account in preparing an estimate of economic impact. In this sense, this research of the medical community serves as a useful case study which can be replicated in other communities.

The City of Memphis

Memphis, Tennessee is the 43rd largest SMSA in the United States with a 1980 population of 913,472.[4] Measured in terms of number of hospital beds, Memphis has a total of 5,300 staffed beds, a number which exceeds that of larger cities such as San Antonio and San Diego.[5]

Memphis had an annual Gross Regional Product of about $11.0 billion and provided a total of 329,000 jobs in 1982.[6] Approximately 16.6 percent of the jobs were in manufacturing, 18.9 percent in government, and 23.7 percent in the private service sector. The unemployment rate for the city tends to hover slightly above the average for the U.S. and in 1982 was 9.7 percent.

The institutional origins of the medical community date back to the founding of Memphis Hospital in 1829 and span a period of enormous growth and change. The city contains Baptist Hospital, which claims to be the nation's largest private, non-profit hospital measured in terms of number of beds and admissions; the world famous St. Jude Children's Research Hospital; and several world famous eye, ear, and orthopedic clinics.[7] The medical complex occupies a substantial portion of the total area in downtown Memphis. The hospitals and clinics of Memphis serve the five-state Mid-South region of Arkansas, Kentucky, Mississippi, Missouri, and Tennessee and bring in an estimated 76,000 patients from outside the Memphis SMSA.[8]

On average, the 19 hospitals in Memphis admit a total of more than 17,400 patients each day.[9] Thousands more are served at the 576 Shelby County physicians' offices and the 317 dental offices in the SMSA. The area's 6 nursing schools train over 1,500 nurses a year, and the vocational schools train a large number of technicians and paraprofessional students. Taken together, this suggests a medical community which has a substantial effect on the SMSA in which it is located. Yet, surprisingly little has been done to quantify the dollar impact of the medical sector on the local economy or to provide a comprehensive estimate of its impact on the labor force.

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The Medical Sector Defined

For the purposes of this article the medical sector is defined to include the following entities operating within the Memphis SMSA: (1) public and private profit and non-profit hospitals including satellites, outpatient facilities, and long-term care facilities; (2) public and private clinics; (3) private doctors' offices including corporations, partnerships, and other groups; (4) free-standing clinics and emergency centers; (5) county, city, and other mental health and public health facilities; (6) long-term care facilities operated by public, private, religious, and charitable institutions; (7) dental, optometry, psychiatric, clinical psychology, and other related medical facilities; (8) medical programs including medicine, dentistry, nursing, optometry, pharmaceuticals, and psychiatry but excluding vocational and technical training programs; (9) pharmacies, optical dispensaries, medical appliances, and other related businesses; (10) pharmaceutical preparation businesses; (11) drug manufacturing companies; (12) medical instrument and appliance manufacturing businesses; (13) medical and dental laboratories; (14) sales to medical and medicine-related companies; and (15) entities engaged in regulation, administration, or support services related to the provision of medical services. Excluded from this definition are preventive medicine-related activities such as health clubs, health food stores, and programs in stress reduction unless provided in a medical facility.

The Impact of the Medical Sector on the Labor Market

The most readily identifiable jobs are those associated with the area's hospitals. There are, at present, twelve general and specialty hospitals in the downtown medical center including Baptist Hospital, City of Memphis Hospital, LeBonheur Children's Medical Center, Memphis Eye and Ear Hospital, Humana Specialty Hospital, Methodist Hospital, Mid-South Hospital, St. Joseph Hospital, St. Jude Children's Research Hospital, Memphis Mental Health Institute, Veterans Administration Hospital, and the University of Tennessee Center for the Health Sciences (UTCHS). An additional seven hospitals are located elsewhere in the area: Methodist South and Methodist North, Eastwood, St. Francis, Baptist East, Lakeside, and Naval Regional Medical Center. Together these facilities employ approximately 18.9 thousand full-time and 2.4 thousand part-time persons. Table 1 shows the full-time equivalent (FTE) employment for these hospitals, as well as other smaller ones in the area.

Under the category of other institutions are several additional employers of medical labor. These include employees of the Memphis and Shelby County Health Department (547), Blue Cross and Blue Shield of Memphis (313), the Southern College of Optometry (132), the 6 mental health centers and their satellites (460), the 30 active nursing homes (2,587), and the 9 home health and other outpatient care services (914).

Table 1
FULL-TIME EQUIVALENT (FTE) STAFF OF MEMPHIS HOSPITALS AND OTHER HEALTH INSTITUTIONS

Hospitals[1]	FTE	Other Institutions	FTE
Baptist East	1,064	Memphis and Shelby County Health Department	547
Baptist Medical Center	4,742	The Southern College of Optometry	132
Baptist Rehab Center	270	6 Mental Health Centers and Their Satellites	460
City of Memphis	1,967	30 Nursing Homes in the Greater Memphis Area	2,587
Eastwood	230	9 Home and Other Outpatient Care Services	914
Humana Specialty	58	Blue Cross/Blue Shield	313
Lakeside	183	Sub-total	4,953
LeBonheur	899	Total	26,359
Memphis Mental Health	371		
Methodist Central	4,308		
Methodist North	439		
Methodist South	449		
Mid-South	337		
Naval	607		
St. Francis	1,893		
St. Joseph	902		
St. Jude	758		
University of Tennessee	615		
Veterans	1,314		
Sub-total	21,406		

[1] Includes residents, interns, and other physicians employed on a payroll basis, but does not include private physicians, consultants, those employees under contract, nursing students, and paramedical students.

Source: *Joint Annual Report of Hospitals, 1982,* Tennessee Department of Public Health; and January 1984 and December 1983 telephone surveys.

Physicians are the most important component of the medical community. In 1981, the 1,800 doctors in Shelby County employed 4,390 secretaries, nurses, and other staff in their 576 offices. This figure includes the employees of over 60 clinics in the county such as Campbell Clinic, Family Practice Center, Memphis Area Medical Center for Women, Semmes-Murphey, and Shea Clinic. An additional 1.2 thousand employees work in the 317 dental offices in the county, 174 work for opticians, 152 work for other health personnel, and 551 work in other health-related offices. Table 2 provides data on the size distribution of these establishments in 1981.

A number of important and often forgotten components of the medical community are also included in the table. These are less obvious employers, yet they contribute a significant number of jobs to the area pool. Included are 126 drug stores in the Memphis area which employ approximately 1.4 thousand employees, the 36 medical and dental labs which employ about 480 employees, and the drug companies which employ about 1.1 thousand. Also included are 2 large pharmaceutical preparation companies with 1.1 thousand employees and the 14 makers of medical instruments and appliances with 1.2 thousand employees. The authors were unable to obtain estimates of the number of drug and hospital equipment salesmen who service the medical community, the number of persons who regulate health care organizations, and the number of persons providing accounting, legal, and technical services. However, over 37,000 positions are currently filled by persons performing jobs related to the delivery of health care. Based on 1982 employment data, this implies that roughly 1 in every 9 jobs in the Memphis metropolitan area is medical sector related.

Table 2
NUMBER OF HEALTH SERVICE ESTABLISHMENTS,
BY EMPLOYMENT SIZE, 1981

	Number of Employees	Number of Establishments by Employment Size									
		Total	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 or more
Offices of Physicians	4,391	576	344	129	67	30	4	1		1	
Offices of Dentists	1,216	317	228	73	14	2					
Offices of Health Practitioners	356	85	70	10	2	1	2				
Nursing and Personal Care Facilities	1,666	26	5	1	2	4	7	7			
Hospitals[1]	15,352	15	4		1				3	4	3
Medical and Dental Laboratories	479	36	19	8	3	4	1	1			
Outpatient Care Facilities	914	41	16	4	9	7	4	1			
Health and Allied Services	551	23	11	1	4	4	1	2			
Drug Stores	1,433	126	37	30	42	16	1				
Pharmaceutical Companies	1,100	2				1					1
Medical Instruments and Supplies	1,200	7	1	1		1	2	1		1	
Total	28,658	1,254	735	257	144	70	22	13	3	6	4

[1] Short-term, non-federal hospitals only.

Source: *County Business Patterns, 1981—Tennessee*, Bureau of the Census, U.S. Department of Commerce, 1983, p. 109.

A Digression on the Desirability of Medical Sector Jobs

Communities tend to look for employers who create the "right kind" of jobs. What constitutes a desirable job is a matter of judgment, but several criteria are commonly employed. First, an ideal employer is one who creates jobs which do not pollute the air, dirty the water, or tax community services like police and fire protection. Second, the ideal employer should be in a stable industry which is not subject to strong cyclical swings, obsolescence, or destructive competition. Third, the ideal employer should be in a business which is likely to enjoy strong and steady growth. Fourth, the ideal employer is one who can utilize the types of labor skills found in abundance in a community or one who will train the types of labor available to provide these skills. Fifth, an ideal employer is one who does not make a large claim on public revenues, either by requiring inordinate police and fire protection or other services or by making extensive borrowings requiring the backing of local governments.[10]

When considering all five criteria, the Memphis medical community appears to come close to the top of the list as an ideal employer. Most medical firms in Memphis produce services rather than goods. They do this by combining specialized labor with sophisticated machinery to produce and deliver health care. These activities have virtually no adverse effect on the environment, and they have spillover benefits which actually provide positive externalities to the community in the form of reduced days lost on the job due to sickness, less chance of epidemics or contagious diseases, and fast and relatively low-cost access to high-quality, specialized care.

The medical industry is relatively recession-proof since a significant portion of medical revenues are paid by third parties. Hence, medical expenditures are not likely to fall as much as revenues in other sectors. Moreover, since the population is aging and as people age they consume more medical services, it is likely that the demand for health care will be strong in the foreseeable future. Recent cost control measures such as DRGs are likely to decrease the demand for medical services to the extent that third-party payments increase at a slower rate, but the effects of our fast-paced society and of the medical profession's growing ability to cope with more illnesses are likely to partially offset the revenue loss.

An ideal employer should utilize labor skills which are in abundance in the local community or he should train the available labor for the types of work required. Memphis has a large pool of unskilled and semi-skilled labor which finds it difficult to obtain employment at a time when manufacturing jobs at all skill levels are shrinking. The large base of service, clerical, and semi-skilled technical jobs in the area's hospitals provides an important source of employment for this group.

The importance of the hospital sector as a major employer of various types of labor is emphasized in Table 3. In addition to 609 highly-skilled staff physicians, the hospitals also employed 423 social workers, 370 therapists, 375 pharmacists and pharmacy technicians, 6.3 thousand nurses and nurses' aides, 2.1 thousand technicians, 1.2 thousand orderlies and other ward personnel, and 3.4 thousand food, housekeeping, and maintenance employees. The salaries these employees receive vary with the nature of the job and the employer. In early 1984, for example, a beginning hospital orderly made about $9.9 thousand annually, a food orderly about $9.1 thousand, a janitor about $9.5 thousand, a secretary about $11.6 thousand, and a registered nurse about $19.0 thousand.[11]

The medical sector makes a significant claim on the public resources of the city. In 1983, for example, several hospitals received city and county funds for support of indigents and for specific programs like the trauma center.

Table 3
MEMPHIS AREA HOSPITAL EMPLOYEE SUMMARY, SHORT-TERM HOSPITALS, 1981

Category	Employees
Total FTE Employees	20,022.6
Nurses and Nurses' Aides	6,291.5
Technicians	2,081.4
Therapists and Therapy Aides	370.0
Pharmacists and Pharmacy Technicians	374.9
Orderlies and Other Ward Personnel	1,173.7
Social Workers and Administrative Staff	423.1
Food, Housekeeping, and Maintenance	3,418.8
Staff Physicians	609.3
Other Non-Health Personnel	5,279.9
Total Training	754.0
Professional Student Nurses	673.0
Practical Student Nurses	-0-
Paramedical Training Program	81.0
Other Hospitals-FTE Employees	728.8
Psychiatric Hospitals	552.3
Research Hospitals	55.0
Geriatric Hospitals	121.5

Just for the expansion of the City of Memphis Hospital an estimated $60.0 million in revenue bonds has been brought to the financial market during the past three years.[12] Virtually all public and non-profit medical institutions are exempted from property taxes and certain other city taxes, but the benefits these institutions bring to the city in the form of the jobs outlined above outweigh the costs they impose.

Dollar Estimates of the Impact of the Major Health Care Organizations

Each year the UTCHS compiles data on the payrolls, operating expenses, and capital expenditures of the major health care providers. The latest figures for 1981 provide an incomplete but valuable insight into the importance of health care providers in the Memphis economy. Table 4 summarizes the annual figures for the entities for which data are available.

The major institutions paid out approximately $624.3 million in direct payrolls to their employees in 1981. Of that amount, the UTCHS complex paid $41.9 million; Memphis hospitals, $314.8 million; Memphis and Shelby County Health Department, $5.1 million; Blue Cross and Blue Shield of Memphis, $4.7 million; the Southern College of Optometry, $2.9 million; and the several nursing homes, $21.6 million. Also included in the total was $3.2 million for home health care, $15.7 million for pharmacies, and $214.5 million for licensed physicians. Note that the total figure includes neither the fringe benefits paid by the major health institutions nor the payrolls of the other medical entities discussed above.

The total dollar impact of the medical community goes far beyond employee compensation. The institutions listed above inject an additional $348.3 million into the economy through operating expenditures. No one knows exactly what proportion of these dollars is spent in Memphis, but a reasonable assumption is that the proportion is significant. The expenditures go for such items as paper products, drugs, office supplies, food and beverages, medical appliances, photographic film, uniform supplies, precision instruments, and telephones. The suppliers of these items, in turn, provide additional secondary employment opportunities not measured by this analysis of direct effects.

It is possible to utilize a multiplier to capture secondary effects. The implicit assumption made in this case is that the economy is operating at less than full employment.[13] The problem with the use of a multiplier is that it requires specific assumptions about the nature of the services purchased by the medical sector, where they are purchased, and the stability of the coefficients in the table used to derive the multiplier estimates. Ideally, we would have liked to derive specific estimates of the multiplier effects for each category based on recent input/output tables. However, time and available funds did not permit this level of sophistication. Hence, estimates were relied on which were used in a recent study by the UTCHS staff which showed that each dollar spent by the medical community results in between $1.83 and $2.50 of new spending in the Memphis area. This implies that the total effect of medical payrolls and operating dollars is to add between $1.84 billion and $2.5 billion to the Memphis economy.

Included in these figures are the expenditures of visitors to the medical complex. These persons come to Memphis to receive specialized and high quality care in the areas of neurosurgery, orthopedic surgery, liver transplants, childhood illnesses, neonatal intensive care, ear and eye surgery, and treatment of serious burns. The Tennessee Department of Public Health collects data on hospital patient origin each year.[14] This information, which is reported to the state, provides an estimate of the dollar importance of the specialized facilities. Of the approximately 205,000 patients admitted to Shelby County hospitals in 1981, over 37.0 percent came from areas outside Shelby County, and 90.0 percent of the non-Shelby County patients were from outside the Mississippi Delta area of Shelby, Fayette, Lauderdale, and Tipton counties. Altogether, over 76,000 non-residents were admitted to Memphis hospitals as patients. UTCHS estimates that these patients contributed $27.0 million to operating expenditures at the major health care organizations.

Finally, about $48.0 million was spent by the medical sector for capital improvements in 1981. These expenditures, largely for new construction, have a powerful effect on a local economy for several reasons. First, construction expenditures have a higher multiplier than many other types of expenditures (2.5). This is because a large portion of each new dollar spent enters the local economy and because the dollars are spent on items which involve substantial new job creation. Thus, a high level of medical construction leads to a prosperous local economy.

Second, medical construction tends to increase the value of surrounding property since it creates an amenity which people value. The amenity may be access to jobs or to medical care, or it may involve the access of businesses that serve the medical community to a major purchaser of their

Table 4
DOLLAR IMPACT OF HEALTH CARE ORGANIZATIONS, 1981
($000)

Entities	Annual Expenditures				
	Payroll	Operating	Capital	Personal	Total
Institutions					
UTCHS	$ 41,886	$ 22,823	$ 2,570		
Memphis Hospitals	314,817	265,916	45,493		
Memphis & Shelby County Health Department	5,079	1,327	0		
Blue Cross and Blue Shield[1]	4,669	8,605	N/A		
Southern College of Optometry	2,876	1,572	0		
Nursing Homes	21,550	17,475	N/A		
Home Health Care	3,164	N/A	N/A		
Pharmacies	15,717	30,527	N/A		
Licensed Physicians	214,544	N/A	N/A		
					$1,020,610
Students[2]					
UTCHS				$ 9,984	
Nursing				$7,753	
Southern College of Optometry				3,769	
					$ 21,506
Visitors to:[3]					
Hospital Patients				$27,021	
Southern College of Optometry				407	
Total					$ 27,428
					$1,069,544

[1] 1982 data.

[2] Total educational expenditures.

[3] Expenditures made in the local economy for food, lodging, etc.

Source: Office of University Relations, University of Tennessee Center for the Health Sciences, 1983.

services. All these factors create higher property values and an incentive for further building. Third, construction is a form of investment which has the effect of increasing the productivity of the medical community. New buildings contain modern equipment and additional space. These forms of capital raise the productivity of existing employees and make it possible for the medical community to employ additional employees.

A complete accounting of the above benefits suggests that the Memphis medical community has had an enormous impact on the local community, ranging between $1.95 billion and $2.65 billion a year. This is a significant figure for an SMSA with an estimated Gross Regional Product of $11.0 billion in 1982. Yet, despite an intense interest in job creation in Memphis in the last three years, the attention paid to the importance of this high-tech, high-labor, high-growth sector has been minimal. This is surprising since when economic historians turn their attention to the last half of the twentieth century, we suspect that they will conclude that the medical sector was a major source of economic growth and change, not only for Memphis but for all of the local communities in which it was a large employer.

FOOTNOTES

[1] Although comprehensive survey articles are still unavailable, a check of the numerous references cited by recent health economics textbooks such as John Rapport, Robert Robertson, and Bruce Stuart, *Understanding Health Economics* (Rockville, MD: Aspen Systems Corporation, 1982); and Paul Feldstein, *Health Economics* (New York: John Wiley & Sons, 1983), confirm the rapid growth of the literature.

[2] See Robert M. Gibson, Daniel R. Waldo, and K. R. Lewit, "Health Expenditures, 1982," *Health Care Financing Review*, Vol. 5 (Fall 1983), pp. 3-4.

[3] Many health economists have done extensive research on the effects of competition on health care financing and delivery. See, for example, Alain C. Enthoven, *Health Plan* (Reading, Mass.: Addison-Wesley Publishing Co., 1980); and Federal Trade Commission, *Competition in the Health Care Sector: Past, Present, and Future*, 1978.

[4] Bureau of the Census, *State and Metropolitan Area Data Book*, 1982.

[5] The San Antonio SMSA had a total population of 1,071,946 and 4,451 staffed beds in 1980, while the figures for the San Diego SMSA were 1,861,846 persons and 2,881 beds. See American Hospital Association, *Hospital Statistics*, 1980.

[6] Bureau of Business and Economic Research, Memphis State University, State Data Center.

[7] *The Commercial Appeal*, October 18, 1981, p. 1.

[8] *Joint Annual Report of Hospitals, 1982*, Tennessee Department of Public Health, and telephone survey in January 1984.

[9] Ibid.

[10] Barbara Tuckman, "Location Decisions, the Florida Tax Structure, and Economic Development," in Howard Tuckman, *Financing Florida State Government* (Tallahassee: Rose Printing, 1979).

[11] Based on average starting salaries compiled from telephone conversations with representatives from Eastwood and Baptist Memorial hospitals.

[12] Department of Finance, Shelby County Government, Tennessee.

[13] If the economy is operating at full employment, then most economists believe that the multiplier will not operate. See Ezra Mishan, *Cost and Benefit Analysis* (New York: Praeger, 1976).

[14] *Joint Annual Report of Hospitals, 1982,* Tennessee Department of Public Health.

CPE: DOES EXPERIENCE CHANGE ATTITUDES?

*Richard W. Jones, Reboe J. DeLozier, Larry W. Spradley, and Robert A. Swerdlow**

Continuing education for members of the various professions has been, and remains, a controversial topic in the United States. One of the key reasons for the concern about continuing education has been the increased emphasis on the protection of the public served by the various professions. Responding to these public concerns, several states and the District of Columbia have enacted legislation providing mandatory continuing education requirements for some of the professions. Certified public accountants (CPAs) have not been exempt from this emphasis on CPE.

Since the concept of mandatory continuing education was first introduced in November 1967 by Marvin Stone, then president of the American Institute of Certified Public Accountants (AICPA), its progression throughout the licensing jurisdictions for accountants has been relentless.[1] The AICPA and National Association for State Boards of Accountancy (NASBA) adopted resolutions supporting the concept of mandatory continuing education in 1971.[2] Guidelines for qualifying CPE were established by the AICPA. Standards for program development established by the AICPA were designed to serve as guidelines to the licensing jurisdictions.[3]

Accounting services have expanded to include business and economic forecasts, administrative control evaluations, and other measures of management effectiveness. Tax and management consulting services have become more technical. New technology, particularly in the areas of automatic data processing and word processing, has not only expanded the capabilities of accountants, but also the level of technical knowledge required to provide quality accounting services. Technical knowledge today suffers an average loss of 50.0 percent of knowledge within five to ten years, presuming the regular use of that knowledge. Society has begun to allocate a greater proportion of resources to continuing education.

The accounting profession has not always responded positively and quickly enough to meet its new demands. Several highly publicized suits such as the *Continental Vending* case, in which the courts moved to establish credibility standards, pointed out the failure of accountants to discharge their public trust in a positive way. Inevitably, government regulations purporting to insure high quality in the practice of accounting proliferated. New requirements for tax return preparers were instituted by the Internal Revenue Service. Requirements of the Securities Exchange Commission regarding publicly-held companies became more stringent. The Financial Accounting Standards Board (FASB) issued statements of disclosure and reporting requirements for audited and unaudited financial statements made available to third parties at an ever increasing rate.

These pressures led the members of the accounting profession to the realization that to maintain their professional status, a program of continuing professional education was essential. The profession needed not only to improve the quality of accounting services, but also to convince the public that its best interests were foremost to the profession. However, the requirement was not instituted without controversy, or, to say the least, widespread interest. The January 1972 issue of *The Journal of Accountancy* presented an article entitled "An Analysis of Participation in Continuing Education" in which practitioners from four Mid-Western states were surveyed. Kansas and Iowa were included in this survey because of their similar environments, except for the continuing education requirement. At that time Iowa had already instituted CPE requirements, but Kansas had not. Since 1969, the number of states requiring continuing education has steadily increased, with Texas being one of the most recent states to require CPE. (Editor's Note: Current continuing education requirements in the Mid-South states are: Arkansas, 60 hours every two years; Louisiana, 90 hours over three years; and Mississippi and Tennessee, 120 hours over three years.)

Do the controversies which motivated that 1972 study still exist today? Has experience changed attitudes toward mandatory continuing education? In an attempt to address these issues, questionnaires were mailed to two groups of CPAs in January 1982. The first group consisted of 500 randomly chosen CPAs licensed by the state of Florida, a state which has had mandatory continuing education since

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January 1, 1974. The second group was composed of 500 randomly chosen CPAs licensed by the state of Texas, a state which had enacted a continuing education requirement which was to become effective during the reporting year of August 31, 1982, and applicable to the licensing year beginning January 1, 1983. There was a usable response rate of 45.4 percent (454 of the 1,000 questionnaires mailed). Of this number 231 (23.1 percent) were from Florida, 213 (21.3 percent) were from Texas, and 10 (1.0 percent) were licensees of both states. Although this response rate is slightly lower than that of the 1972 study in the Mid-West, it indicates a continued high interest in this subject.

Demographic Data

Participants in the survey were asked to indicate their years of experience as a CPA. The experience category containing the largest number of respondents of both groups is five years or less, which included 31.3 percent of all respondents. Table 1 presents an analysis of the responses by group.

Table 1
PERCENT OF RESPONSES BY EXPERIENCE CATEGORIES

Experience Categories	Florida Respondents	Texas Respondents	Both Groups	Total Respondents
5 Years or Less	34.6	28.2	20.0	31.3
6 to 10 Years	27.3	23.9	40.0	26.0
11 to 20 Years	18.2	23.0	40.0	20.9
Over 20 Years	19.5	23.9	-	21.1
No Response	0.4	0.9	-	0.7

Respondents were also asked to indicate their primary area of employment. Choices included were public accounting, industry, government, education, or other stated employment. Table 2 displays an analysis of the employment categories of the respondents. The majority of the Florida respondents (66.7 percent) were employed in public accounting. The employment category containing the greatest number of Texas respondents was industry, which included 44.1 percent of the respondents.

Table 2
PERCENT OF RESPONSES BY EMPLOYMENT CATEGORIES

Employment Categories	Florida Respondents	Texas Respondents	Both Groups	Total Respondents
Public	66.7	40.8	80.0	54.8
Industry	21.2	44.1	20.0	31.9
Government	6.5	4.7	-	5.5
Education	2.6	5.2	-	3.7
Other	3.5	6.1	-	4.6

A question arises at this point concerning the difference in employment categories. Since Florida requires only those certificate holders engaged in the practice of public accounting to meet its CPE requirements, does the lower percentage of CPAs in Florida engaged in industrial accounting indicate a lessening of desire to achieve certification by this non-public group or is it a reflection of a more industrial economic environment in Texas?

Additional information requested of those CPAs in public practice included the type of firm in which they were employed. Table 3 presents an analysis of the type of firm in which respondents were employed. In both groups females comprised approximately 10.0 percent of the sample.

Table 3
PERCENT OF RESPONDENTS EMPLOYED IN PUBLIC ACCOUNTING BY FIRM CLASSIFICATION

Classification of Firm	Florida Respondents	Texas Respondents	Both Groups	Total Respondents
National	23.4	16.1	50.0	21.7
Regional	5.2	1.1	12.5	4.0
Local	46.1	33.3	37.5	41.4
Individual Practitioner	22.7	43.7	-	29.3

Perceptual Differences Toward Mandatory CPE

Tables 4 and 5 show the differences in attitudes toward CPE between the two groups. Texas licensees tended to strongly oppose mandatory CPE with periodic recertification for continued licensing, whereas Florida licensees tended to strongly favor this concept. Since the Florida system of continuing education required recertification or re-establishment every two years in order to maintain an active license to practice public accounting, one possible explanation of the response of these licensees is that the response is an expression of their satisfaction with their system. Apparently, Texas licensees were still opposed to the notion of mandatory continuing education even

Table 4
PRECENT OF RESPONSES OF FLORIDA GROUP CONCERNING MANDATORY VERSUS VOLUNTARY CONTINUING PROFESSIONAL EDUCATION ISSUES

	Strongly Opposed	Opposed	Neutral	Favor	Strongly Favor
Mandatory CPE with Periodic Recertification for Relicensing	20.8	14.7	8.2	23.4	31.2
Mandatory CPE with Some Other Form of Enforcement	8.2	13.9	19.9	32.9	19.5
Voluntary CPE with Mandatory Reporting Requirement	21.2	33.3	19.9	13.9	6.5
Voluntary CPE with No Reporting Requirement	40.3	34.2	10.8	5.6	3.9
Required CPE as a Disciplinary Action of the State Board Only	34.2	27.7	16.9	10.4	3.9
Mandatory Re-examination and Recertification for Relicensing	61.9	22.9	6.9	3.0	1.3

MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

THE MID-SOUTH ECONOMY

MID-SOUTH ECONOMY

The U.S. and Mid-South economies continued on the path of expansion during first quarter 1984. The nation's real Gross National Product grew at an upwardly revised annual rate of 8.8 percent, and the Consumer Price Index registered a moderate 4.5 percent increase over the past twelve months. Industrial production in April registered its 17th consecutive monthly increase, 14.4 percent higher than last April and 6.0 percent above the previous peak in July 1981. However, for the past three months the nation's unemployment rate has stood at 7.8 percent, and interest rates have begun to creep upward. The negative effects of higher interest rates on interest-sensitive industries such as housing and automobiles, coupled with a more cautious approach by businessmen to moderating demand from consumers and inventory buildup, have led many observers to expect the momentum of recovery to slow down for the remainder of 1984. Accordingly, the Chemical Bank of New York's business confidence scorecard for the second half of 1984 rates four economic factors as being neutral to moderately favorable, four financial factors as being neutral (higher corporate liquidity offsets negative supply and demand factors for loanable funds), and four psychological factors as being neutral to moderately unfavorable due to federal budget deficit prospects and weaknesses in consumer confidence.

For the Mid-South, two recent reports provide evidence of a robust economy. First, a National Planning Association study reported that in 1983 Mid-South states registered $5.4 billion in new investment, creating 66,378 new jobs. This figure represented approximately 44.0 percent of the new jobs created in the eleven-state Southeast region. Second, a recent analysis by Saloman Brothers reported that business loan activity and employment growth from first quarter 1983 to first quarter 1984 was "particularly rapid" in the Southeast region, outpacing all other regions. Business loans at banks in the Southeast increased twice as fast as in the West and Texas regions, with employment growth four times as rapid as in the second place Western states.

Labor

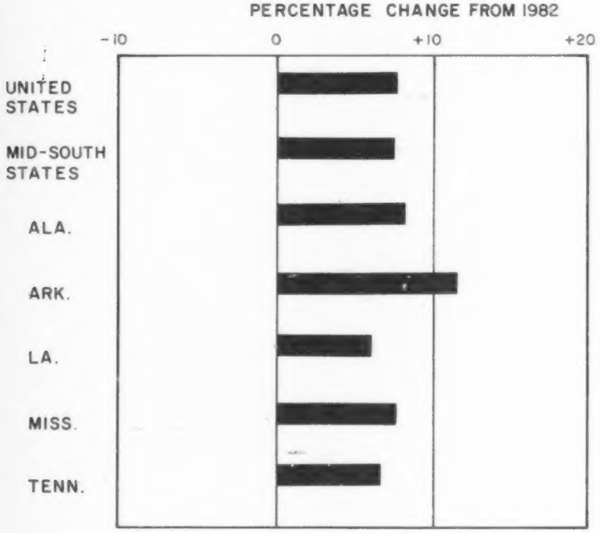
The Mid-South's aggregate unemployment rate fell below double digits in April 1984 to stand at 9.3 percent, a decline of 2.4 percentage points from last April. Total non-agricultural employment added 107,400 more workers to Mid-South payrolls from the levels of a year ago. Manufacturing employment gains were especially good in electrical/electronic equipment across the Mid-South states, with textiles improving in Tennessee and Mississippi. Alabama registered solid gains in its basic steel industry, with Tennessee registering its best gain in transportation equipment. On the non-manufacturing side, Alabama and Tennessee registered solid gains in construction employment, with retail trade and service employment up across the Mid-South. One especially bright note concerning employment was found in a Conference Board survey of chief executives which indicated that 50.0 percent of the respondents are looking for a rise in own-industry employment during the remainder of 1984, by far the highest percentage figure since 1978.

Construction

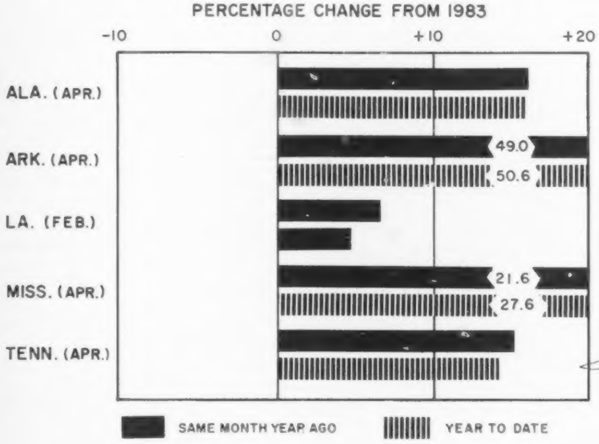
For the twelve-month period ending in March 1984 compared to the same twelve months in 1983, total residential permits increased 69.0 percent in the Mid-South (excluding Arkansas), outpacing the national increase of 48.2 percent. Alabama, Mississippi, and Tennessee continued to outperform the nation for the first four months of 1984. Non-residential construction activity also continued to outpace the nation for most of the Mid-South states except Louisiana. Construction of industrial buildings was mixed across the Mid-South, with Tennessee turning in the best performance, up 66.0 percent from a year ago.

Meanwhile, the National Association of Home Builders' index of housing activity declined for the second straight month, which is an indication that housing activity is expected to "trail off by the end of the year." Higher interest rates are also expected to lower builders' expec-

PERSONAL INCOME - IV QTR. 1983

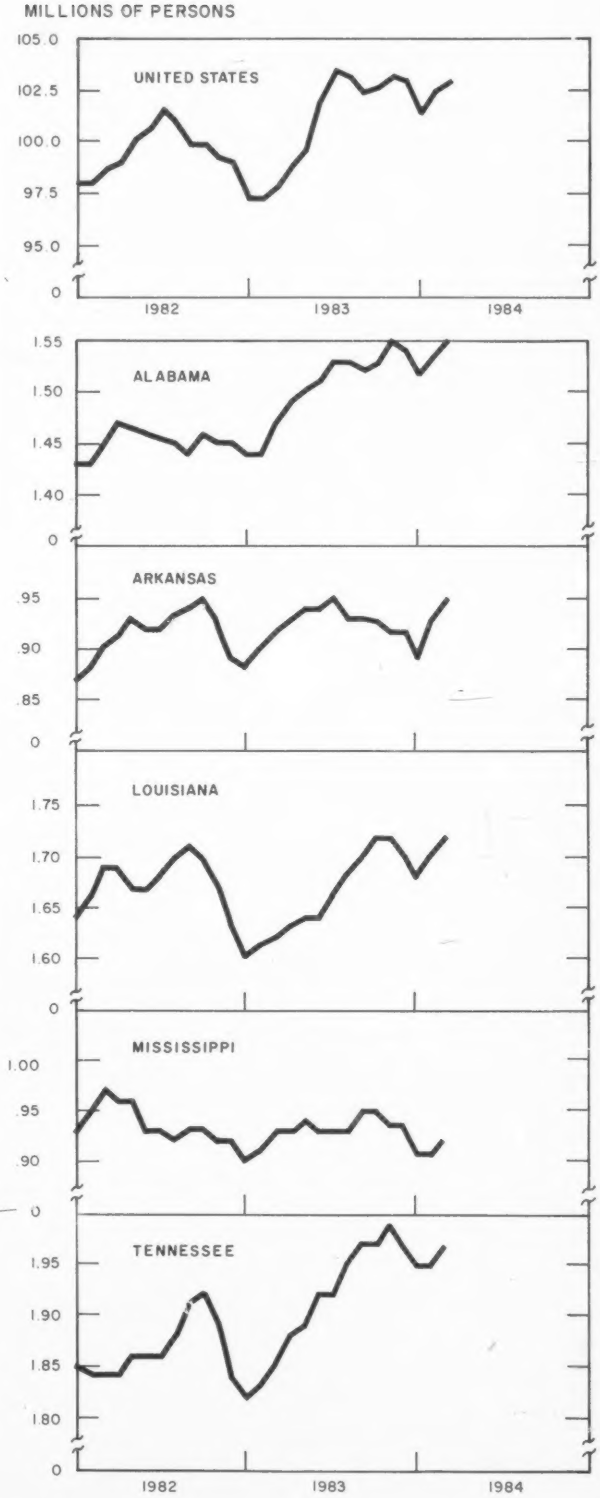


SALES TAX COLLECTIONS 1984



SOURCES: BUREAU OF ECONOMIC ANALYSIS
STATE DEPARTMENTS OF EMPLOYMENT
SECURITY AND REVENUE.

TOTAL EMPLOYMENT



tations. The current Federal National Mortgage Association conventional fixed-rate mortgage is slightly above 14.0 percent.

Finally, according to the April 1984 issue of *Work Boat*, which details the Corps of Engineers' Mid-South waterways construction projects for fiscal year 1984, the Mid-South is anticipated to receive $31.7 million in new construction. Louisiana will receive the majority of the funds for hurricane protection, and Mississippi will receive $2.0 million for the Tennessee-Tombigbee waterway.

Finance

Recent increases in interest rates since January have raised the level of uncertainty in money markets. The average prime rate continues to languish in double digits, experiencing a 150 basis points rise since January, with six-month prime commercial paper increasing 300 basis points from its levels of a year ago.

Mid-South commercial banks registered an increase of 7.0 percent in total deposits from last March, with savings deposits accounting for most of the increase. However, savings deposits are well below the levels registered in January. Mortgage loans made by Mid-South savings and loans totaled $584.3 million in March 1984, 24.4 percent higher than last March. Also, net savings flows have declined at Mid-South savings and loans, indicative of the lower personal savings rate across the nation.

LABOR 1984	United States (March)	Mid-South States				
		Alabama (April)	Arkansas (April)	Louisiana (April)	Mississippi (April)	Tennessee (April)
Civilian Labor Force	111,828,000	1,776,100	1,065,900	1,915,800	1,032,800	2,192,600
Percent Change Year Ago	+ 2.0	+ 0.5	+ 4.0	+ 0.4	- 3.8	+ 0.1
Unemployed	9,057,000	195,700	91,700	169,900	96,800	185,800
Percent Change Year Ago	-23.7	-23.1	-17.8	-28.1	-34.6	-32.8
Unemployment Rate						
1984	8.1	11.0	8.6	8.9	9.4	8.5
1983	10.8	14.4	10.9	12.4	13.9	12.6
Non-Agricultural Wage & Salary Employees	91,788,000	1,346,200	770,200	1,569,600	805,400	1,791,400
Percent Change Year Ago	+ 4.1	+ 2.6	+ 4.8	+ 0.9	+ 2.7	+ 5.1
Manufacturing Employment	19,551,000*	351,900	209,900	178,900	211,800	493,200
Percent Change Year Ago	+ 7.0	+ 5.2	+ 6.7	+ 1.0	+ 7.1	+ 6.9
Non-Manufacturing Employment	72,939,000*	994,300	560,300	1,390,700	593,600	1,298,200
Percent Change Year Ago	+ 3.4	+ 1.7	+ 4.1	+ 0.9	+ 1.2	+ 4.4
Average Weekly Earnings of Production Workers in Manufacturing	$369.87	$324.28	$298.82	$425.54	$281.48	$316.06
Percent Change Year Ago	+ 6.9	+ 6.8	+ 8.6	+10.6	+ 7.8	+ 6.8
Average Weekly Hours of Production Workers in Manufacturing	40.6	41.1	40.6	42.3	40.5	41.1
Percent Change Year Ago	+ 2.5	+ 2.2	+ 2.3	+ 7.4	+ 2.8	+ 2.8
Average Hourly Earnings of Production Workers in Manufacturing	$ 9.11	$ 7.89	$ 7.36	$ 10.06	$ 6.95	$ 7.69
Percent Change Year Ago	+ 4.2	+ 4.5	+ 6.2	+ 3.0	+ 4.8	+ 3.9

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1] MARCH 1984	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building						
Percent Change Year Ago	+40.3	+58.2	N.A.	+27.0	+45.9	+ 70.3
Residential Building						
Percent Change Year Ago	+58.9	+65.3	N.A.	+51.7	+60.1	+105.4
Non-Residential Building[2]						
Percent Change Year Ago	+21.6	+53.3	N.A.	+ 9.4	+28.4	+ 49.8
Total Dwelling Unit						
Percent Change Year Ago	+48.2	+67.7	N.A.	+51.3	+60.9	+100.0

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

FINANCE MARCH 1984	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of March 1984 **Percent Change from Comparable Date** in 1983							
Total Deposits	+ 7.5	+ 7.0	+ 8.0	N.A.	+ 5.7	+ 7.8	+ 7.3
Demand Deposits	+ 3.8	+ 2.3	+ 7.2	N.A.	- 2.2	+ 3.2	+ 4.0
Time Deposits	+ 3.3	+ 5.1	+ 5.4	N.A.	+ 2.7	+ 4.9	+ 8.0
Savings Deposits	+17.2	+15.3	+15.9	N.A.	+22.3	+23.3	+ 5.0

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY MARCH 1984	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Mortgage Loans Made (millions)	$76.9	$185.7	$215.1	$44.6	$ 62.1
Percent Change Year Ago	+27.1	+ 1.6	+ 40.5	+51.7	+ 40.1
Percent Change Year-to-Date	+38.6	+ 49.5	+ 64.6	+39.6	+ 31.6
Net Savings Flow (millions)[2]	$66.8	$125.9	$232.2	$32.0	$106.5
Percent Change Year Ago	-34.6	- 31.5	- 4.9	-23.8	- 18.8
Percent Change Year-to-Date	-44.6	- 47.4	- 15.7	-39.3	- 70.0

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

TENNESSEE ECONOMY

The Tennessee economy continued to perform well during first quarter 1984. The state's unadjusted unemployment rate in April was 8.5 percent, down 2.6 percentage points from the January rate and the lowest in the five-state Mid-South region. Also, initial claims for unemployment benefits during April were 33.7 percent below last April's level. Manufacturing employment is 6.9 percent higher than a year ago, and average weekly hours for production workers climbed to 41.1.

Tennessee's farmers have been aided by increased farm real estate values and improvements in weather conditions. Planting is near completion due to improved weather, and a recent report by the U.S. Department of Agriculture showed that the average value per acre of land and building on Tennessee farms was 3.0 percent higher than a year ago, while farm real estate values nationally fell 0.5 percent. Additionally, the index for prices received for crops by Tennessee farmers is 18.4 percent higher than last May; however, prices for livestock registered a decline of 3.4 percent.

Construction activity also remains robust. For the twelve-month period ending in March 1984 compared to the same period in 1983, total building activity advanced 70.3 percent, with multi-family units and office buildings the best performers. Construction employment added 10,600 workers since last April, and total mortgage loans closed at Tennessee savings and loan institutions increased 34.1 percent.

Finally, a recent study by the National Planning Association ranked Tennessee second among Southeastern states in jobs created during 1983 and predicted that Tennessee's economy would have the eleventh fastest growth rate in the nation through 1990. Additionally, a study by Howard Ecker and Company ranked Memphis the least expensive among 34 major cities in terms of business relocation cost per employee.

though such requirements were imminent. Only 17.6 percent of the respondents who strongly favored mandatory education with recertification for relicensing were from Texas, whereas 82.4 percent of those strongly favoring this concept were currently practicing under these requirements.

Table 5
PRECENT OF RESPONSES OF TEXAS GROUP CONCERNING MANDATORY VERSUS VOLUNTARY CONTINUING PROFESSIONAL EDUCATION ISSUES

	Strongly Opposed	Opposed	Neutral	Favor	Strongly Favor
Mandatory CPE with Periodic Recertification for Relicensing	50.7	24.9	4.2	11.7	7.0
Mandatory CPE with Some Other Form of Enforcement	17.8	23.5	16.9	25.4	13.6
Voluntary CPE with Mandatory Reporting Requirement	11.7	15.5	26.3	24.4	18.8
Voluntary CPE with No Reporting Requirement	18.8	30.0	26.3	8.0	12.7
Required CPE as a Disciplinary Action of the State Board Only	23.0	29.6	22.5	14.6	5.6
Mandatory Re-examination and Recertification for Relicensing	73.2	18.8	1.4	2.8	1.4

The second system of continuing education considered was mandatory continuing professional education with some other form of enforcement (other than recertification for continued licensing). Again, there is a significant relationship between the respondents and the respondents' state of experience.

A system of voluntary continuing education with mandatory reporting received opposition from the Florida respondents. The modal attitude of this group was to "oppose" with 33.3 percent of the responses, followed by "strongly oppose" with 21.2 percent of the responses. The modal attitude of the Texas licensees was "neutral" with 26.3 percent of the responses, closely followed by 24.4 percent of the responses indicating "favor."

Voluntary continuing education with no reporting gained little support from either group. However, the percentage of Florida licensees opposed to this idea was notably greater than that of the Texas licensees. The opposite was true of favorable responses.

Requiring continuing professional education as a disciplinary action of the state board of accountancy is not a true system of continuing education; rather, it is an alternative to having a system of CPE. Only the CPAs found to have been performing substandard work by the state board of accountancy would be required to complete continuing education hours. Neither group seemed to favor this concept, and the differences between the responses of the two groups were not statistically different.

This same lack of disagreement was evident in the responses to the last alternative. Of the 454 respondents, 303 (66.7 percent) strongly opposed mandatory re-examination and recertification for continued licensing.

Other Results

Additional questions were asked in the survey. Respondents were asked if there were certain groups which should be exempt from mandatory CPE requirements.

Table 6 presents a summary of the responses concerning exemption of certain groups. There was statistically significant agreement in the overall responses of the two groups. The only chi-square statistic which is significant at the .05 level concerns the exemption of accountants in industry from continuing education requirements. One possible explanation for this difference in responses might be found in the different composition of the two groups. Since only 21.2 percent of the Florida respondents were in industry and 44.1 percent of the Texas respondents were in industry, this difference in response might reflect a desire by the Texas industrial accountants to exempt themselves.

Table 6
PERCENT OF RESPONDENTS FAVORING EXEMPTION OF CERTAIN GROUPS OF CPAs FROM CONTINUING EDUCATION REQUIREMENTS

Group to be Exempt	Favoring Exemption	
	Florida Respondents	Texas Respondents
Education	21.6	15.0
Government	15.2	19.2
Industry	16.0	27.2
Public	3.5	2.3
None	51.9	45.5

Another question posed concerned itself with the appropriate number of CPE hours to be required each year. Opinions of the two groups regarding the appropriate number of hours were significantly different. The prevalent choice of the Texas respondents was the 33 to 40 hour category, while the Florida respondents chose 25 to 32 hours. However, 10.0 percent of the Florida licensees favored 41 hours or more per year; only 3.3 percent of the Texas licensees thought 41 or more hours was the most appropriate number. Florida respondents opted for the number of hours currently required under their law. Texas licensees selected the number of hours proposed for their requirements, which is also the recommended number by the AICPA.

A final question addressed the attitudes concerning the most effective method of obtaining CPE, and the results are presented in Table 7. There were certain notable differences of opinion between the two groups. "In-firm" programs were approved by 29.0 percent of the Florida respondents, but only 18.3 percent of the Texas respondents selected "in-firm" programs. A greater percentage of Texas licensees indicated their approval of seminars and conferences of other professional groups approved by the state society. More Florida CPAs recognized professional development courses with testing upon completion as an acceptable method than did Texas CPAs. This may be attributable to recognition by Florida respondents that presence at a course does not provide enlightenment unless the material is absorbed by the participant. The years of experiencing continuing education requirements may have brought the realization that some form of acquired knowledge is necessary for such courses to be effective.

Table 7
PERCENT OF RESPONSES BY PREFERENCE OF METHODS OF OBTAINING CONTINUING PROFESSIONAL EDUCATION

Method	**Florida Respondents**	**Texas Respondents**
Technical Sessions at AICPA, State Society, and Local Chapter Meetings	26.8	30.5
University or College Courses	13.0	18.3
Formal, Organized, In-Firm Programs Approved by State Society	29.0	18.3
Professional Development Programs of the AICPA and State Society Without Testing	35.1	35.2
Professional Development Programs of the AICPA and State Society With Testing Upon Completion	15.2	13.6
Seminars and Conferences of Other Groups Approved by Society	23.8	33.8
Preparation and Presentation of Professional Development Course	11.7	11.7
Teaching a College Course	5.2	4.7

Conclusions

Throughout the steady spread of mandatory continuing education requirements to the licensing jurisdictions a controversy has remained over whether this was the most appropriate way to combat the problem of substandard work by CPAs. Clearly, accountants are still not in agreement about whether a mandatory CPE system is better than a voluntary system. CPAs who had worked under a CPE requirement felt differently than CPAs who had not yet experienced mandatory continuing education requirements. The CPAs who had not experienced the CPE requirement favored a voluntary continuing education system. CPAs who had experienced CPE indicated a preference for mandatory continuing education systems. This may be an indication that after a mandatory system of continuing education has been in effect for a number of years and CPAs have had the opportunity to adjust their professional lives to this additional demand, they do not find compulsory CPE quite so burdensome. The clearly demonstrable difference in attitudes might best be explained as a reflection of the differences in experience. Those who have not yet experienced the requirement but are faced with imminent installation of the requirement probably register a negative attitude because of fear of the unknown, whereas those who have experienced mandatory CPE feel the requirement justified. In this light, the study results can be interpreted as an affirmation of the validity of the concept of CPE.

FOOTNOTES

[1] Elmer G. Beamer, "Continuing Education—A Professional Requirement," *Journal of Accountancy*, MXXXIII (January, 1972), 32.

[2] *Report of the Committee on Continuing Education*, Chairman Elmer G. Beamer (New York: The American Institute of Certified Public Accountants, April 7, 1976), p. 11; and National Association of State Boards of Accountancy, *Model Provisions*, p. 8.

[3] "Standards for CPE Program Development," *Journal of Accountancy*, CXLII (July, 1976), 94.

THE IMPACT OF FEDERALLY-ASSISTED HOUSING ON SINGLE-FAMILY HOUSING SALES: 1970-1980

*Carol E. Babb, Louis G. Pol, and Rebecca F. Guy**

Introduction

This article focuses on the impact of federally-assisted housing on single-family home selling prices in Memphis, Tennessee. Specifically: Does the placement of federally-assisted housing have a deleterious effect on housing sales prices in the surrounding area? However, before discussing impact, a brief history of the national legislation which created federally-assisted housing will be presented.

Federal Housing Programs

The origin of federally-assisted housing in the U.S. can be traced to the Great Depression of the 1930s. With the passage of the National Industry Recovery Act (NIRA) in 1933, the Public Works Administration (PWA) was created. Under the legislative mandate of the NIRA, the PWA bought land, cleared houses, and built 50 low-rent housing projects in 37 cities.

In 1934, the National Housing Act was approved. It established the Federal Housing Authority (FHA) and contained two sections dealing with the financing of public housing. Section 221(d)(3) of this legislation provides for multi-family rental housing for low- and moderate-income households. Its objective is to assist in the financing of the construction or substantial rehabilitation of multi-family (five or more units) rental or cooperative housing. This program allows for project mortgages to be insured at the FHA's ceiling interest rate for 100.0 percent of the total project cost. The insured mortgage amounts are to be controlled by statutory dollar limits per unit intended to assure moderate construction costs. These mortgages may be obtained by public agencies; non-profit, limited-dividend, or cooperative organizations; private builders; or investors who sell completed projects to such investors (U.S. Department of Housing and Urban Development, 1978:27). Units financed under this program may qualify for additional assistance under the Section 8 program (to be discussed later) if occupied by eligible low-income families.

Section 236 of the 1934 Housing Act established guidelines for an alternative means of financing public housing units. Under Section 236, mortgage insurance, interest reduction, and operating subsidies are provided in order to reduce rents for low-income families. Originally, the Department of Housing and Urban Development (HUD) insured multi-family mortgages and paid interest subsidies to lenders, which allowed the mortgage to be paid off by the project owner at a very low interest rate (as low as 1.0 percent). The reduction in monthly rents was designed to produce new or substantially rehabilitated rental or cooperative housing units for low-income households. Tenants contributed 25.0 percent of their adjusted income, or the basic rent, whichever was greater. Beginning in 1974, HUD paid additional subsidies to cover the difference between the tenant's contribution and the actual costs of operating the project. Another recent modification in regulations requires tenants to contribute 30.0 percent of their adjusted income or the basic rent, whichever is greater. Eligibility for Section 236 mortgages is the same as for the 221(d)(3) mortgages. Section 236 housing is open to both tenants who can afford fair market rents and those who cannot. However, only the latter are subsidized (Department of Housing and Urban Development, 1978:31). Since the housing subsidy moratorium of January 5, 1973, this program has been suspended. Current activity consists of funding commitments issued before the moratorium and amending existing contracts.

With the passage of the U.S. Housing Act of 1937, three additional types of housing assistance were made possible. The Section 8 program, later put into effect by part of the Housing and Community Development Act of 1974, established a rent subsidy for low-income families, thus making decent housing in the private market available. The Department of Housing and Urban Development makes up the difference between what a low-income household can afford and the market rent for an adequate housing unit. Housing that is subsidized must meet certain standards of safety and sanitation. In addition, the rent for these units must fall within the range of fair market rent determined by HUD. This rental assistance may be applied to existing housing, newly constructed housing, or substantially rehabilitated units. Local public housing agencies administer the existing program, certify eligible tenants, inspect the units proposed for subsidy, and contract with approved landlords for payment. Proposals for substantial rehabilitation or new construction may be submitted by non-profit and profit-motivated developers, alone or in conjunction with public housing agencies. Upon approval of proposals, HUD contracts to subsidize the units to be occupied by eligible families. To be eligible, families must be termed low-income, with incomes amounting to 80.0 percent or less of the area median income, and pay between 15.0 and 25.0 percent of their income for rent, including utilities. In addition to the housing payment from HUD or a public housing agency, the project owner receives tenant rent directly from the eligible family occupying the unit. The total amount received by the owner for rent is fixed in the contract.

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In accordance with Section 8, certain restrictions are imposed on the placement of potential sites for new construction projects. First, the site and neighborhood must be suitable from the standpoint of facilitating and furthering compliance with the applicable provisions of the Civil Rights Acts of 1964 and 1968. A second restriction prohibits the location of a site in a racially-mixed area if the project will cause a significant increase in the proportion of minority to non-minority residents in the area (24 CFR:330). In addition to new construction projects and the conversion of existing housing, the Section 8 housing program includes provisions for renovated private dwellings to be converted to the Section 8 housing program.

Another portion of the 1937 Housing Act also dealt with provisions for public housing. In accordance with the Section 23 program, HUD pays basic annual contributions that allow local public housing agencies to lease private housing to low-income families at affordable rents. These annual subsidies make up the difference between the rents paid to private owners and what the low-income tenants can afford. The amount of rent paid by the tenant is based on his/her income, but cannot exceed 25.0 percent of the adjusted income. Local public housing authorities are allowed to participate in this program. In the late 1970s, Section 23 was superseded by the Section 8 program. Units previously covered under the former are now being converted to the Section 8 housing program.

Finally, the 1937 Housing Act also established guidelines for the most familiar type of public housing—low-income housing projects. Local public housing agencies develop, own, and operate low-income public housing projects, with HUD furnishing technical and financial assistance. This financial aid takes two forms. First, HUD provides preliminary loans for planning, and second, HUD pays annual rent subsidies to the public housing agencies. Tenant rent, based on ability to pay, contributes to operating costs for the housing project.

Since the 1930s, legislative mandates regarding public housing have changed in intent and function. The earlier housing programs, notably Section 221(d)(3) and Section 236, are primarily concerned with making the construction or substantial rehabilitation of public housing attractive to financiers through the availability of HUD-insured mortgages and below-market interest rates. Additionally, participating tenants may qualify for rent supplements under the Section 8 program. Later housing programs like Section 8 and Section 23 are more concerned with providing rent subsidies. Both of these programs enable low-income tenants to rent housing in the private market, including existing housing in good condition. Rent subsidies are paid by the Department of Housing and Urban Development.

Although well over one million public housing units are in existence throughout the United States, research on the subject has been somewhat limited in scope. For the most part, studies of public housing have focused on various aspects of neighboring, such as the degree of tenant interaction and tenant well-being (Taube & Levin, 1971; Eiseman, 1975; Angrist, 1974). Very little research has been devoted to the broader issue of whether public housing is related to neighborhood change, specifically changes in property values. Instead, it has been accepted as common sense that the introduction of public housing causes a decline in property values.

The following analysis attempts to focus on this common sense notion in a systematic manner.

Data And Methods

Since there was no single data set containing all of the variables perceived to be of importance in an analysis of the relationship between subsidized housing and single-family home sales prices, a data set was constructed by taking specific items from four sources: (1) *1970 U.S. Census of Population and Housing;* (2) *1980 U.S. Census of Population and Housing;* (3) a computerized sales list representing all residential sales in the city of Memphis from 1968-1979; and (4) information on the names and locations of public and federally-assisted housing sites in the city of Memphis.

The Memphis Housing Authority and the Memphis Department of Housing and Community Development provided the names and locations of federally-subsidized housing complexes in Shelby County, as well as the specific types of housing programs, the year of proposal approval or proposal submission for each site, and the year of occupation. The 22 *subsidized* housing sites in this analysis were limited to those which were approved and/or occupied between 1968 and 1979. These cases represent housing subsidized under Section 23, Section 8, Section 236, and Section 221(d)(3) housing programs, as well as low-rent public housing.

Once the housing sites were determined, neighborhood boundaries for each site were delineated by examining aerial photographs and land use maps circa 1970.[1] As often as possible, natural neighborhood boundaries such as railroad tracks, interstate highways, major streets, and vacant land were utilized. Since it was necessary to identify north, south, east, and west boundaries for each site, natural neighborhood boundaries such as public parks and waterways provided some indication as to where predominantly residential land use gave way to other patterns of land use. Within these boundaries, specific census blocks were identified.

Additionally, comparison or control neighborhoods without public housing were delineated for each of the 22 neighborhoods containing subsidized housing. An attempt was made to match each pair of neighborhoods as closely as possible with regard to social and economic characteristics.[2] For the majority of the matched pairs, both the public housing and control neighborhoods are located in the same census tract, and the majority of paired neighborhoods lie adjacent to one another. With their boundaries identified, these site and control neighborhoods became the unit of analysis.

One issue which emerged from this method of control neighborhood selection concerned the potential spillover effect of subsidized housing neighborhoods on adjacent control neighborhoods. While these neighborhoods are, in fact, adjacent, their physical distance from each other is, in most cases, at least one-half mile. That is, by aggregating blocks, and in most cases at least ten blocks were aggregated, relatively large land area neighborhoods were created. Thus, the potential spillover effect was minimized, though it is recognized that some may have occurred.

Three dependent variables were selected for analysis: home sale price, the number of sales, and a computed ratio of neighborhood home sale price to the home sale price for the city. The computed ratio served two purposes. First, it was intended to be an adjustment for inflation. That is, it controlled for the natural tendency of property values to increase over time. Second, it indicated whether the appreciation rate of residential sales prices in the study neighborhoods were lower than, higher, or comparable to the average appreciation rate of residential property in the city. These block data were taken from a computerized sales list and represented all residential sales in the 12-year period from 1968 to 1979, a time interval that allowed for longitudinal analysis. However, due to the small number of home sales in each year in several of the areas during this time period, the sales data were aggregated at the block level for each neighborhood, then aggregated into three four-year time intervals in order to stabilize statistics. Again, the purpose of this research was to determine whether the introduction of public housing is related to changes in residential sales price patterns. Therefore, if there is no relationship between public housing and home sales price patterns, then there should be no marked differences in mean sales prices and ratios between or within control and site neighborhoods.

Results

The statistical procedure utilized, t-test for dependent samples, was dictated by the characteristics of the data.

Furthermore, upon initial examination of the sales data, it was apparent that 11 of the 22 pairs of neighborhoods had no sales for at least one time interval. Since inclusion of data from these neighborhoods would have biased the findings, these 11 pairs were excluded from the analysis. This exclusion reduced the number of housing sites to 11.

In Table 1, there appears to be little difference in the average prices and ratios between the site and control neighborhoods. As expected, there was an overall increase in average sales price over the 12-year period in both site and control areas. Additionally, the ratios between neighborhood and city average sales prices increased over time in both sites and controls. There was no observable difference between the rate of increase for site and control neighborhoods.

The results of the t-tests are reported in Tables 2 through 4. As can be seen, inter-neighborhood differences

Table 1
TYPE OF HOUSING BY NEIGHBORHOOD MEAN SALES, PRICE, AND COMPUTED RATIO FOR SELECTED TIME INTERVALS
(N = 11)

Type of Housing	Time Interval 1 1968-1971	Time Interval 2 1972-1975	Time Interval 3 1976-1979
Neighborhood 1			
Section 8 Housing	55	39	56
	$28,051	$35,395	$51,470
	1.59	1.44	1.98
Control Neighborhood	8	9	21
	$33,637	$39,507	$54,405
	1.91	1.61	2.10
Neighborhood 2			
Section 236/8 Housing	175	98	133
	$26,373	$37,657	$45,233
	1.50	1.53	1.74
Control Neighborhood	32	16	23
	$19,200	$28,295	$34,418
	1.09	1.15	1.33
Neighborhood 3			
Section 236/8 Housing	83	77	97
	$14,151	$19,723	$25,946
	.80	.80	1.00
Control Neighborhood	50	43	49
	$12,653	$15,834	$21,776
	.72	.65	.84
Neighborhood 4			
Section 236/8 Housing	36	53	63
	$11,793	$17,780	$24,760
	.67	.72	.95
Control Neighborhood	3	3	2
	$15,725	$21,488	$28,475
	.89	.88	1.10
Neighborhood 5			
Section 236/8 Housing	3	19	18
	$19,208	$27,650	$39,100
	1.09	1.13	1.51
Control Neighborhood	14	27	24
	$17,329	$27,808	$35,448
	.98	1.13	1.37
Neighborhood 6			
Section 236/8 Housing	10	6	4
	$17,913	$23,342	$30,713
	1.02	.95	1.18
Control Neighborhood	68	32	39
	$17,525	$24,713	$32,679
	1.00	1.01	1.26

(continued)

Table 1 (continued)

Type of Housing	Time Interval 1 1968-1971	Time Interval 2 1972-1975	Time Interval 3 1976-1979
Neighborhood 7			
Section 236 Housing	83	55	81
	$9,053	$12,938	$17,523
	.51	.53	.68
Control Neighborhood	31	28	32
	$11,912	$16,040	$23,553
	.68	.65	.91
Neighborhood 8			
Low-Rent	36	54	91
Public Housing	$18,891	$26,296	$38,358
	1.07	1.07	1.48
Control Neighborhood	203	67	60
	$12,662	$14,588	$19,525
	.72	.59	.75
Neighborhood 9			
Low-Rent	6	5	3
Public Housing	$12,392	$17,757	$25,940
	.70	.72	1.00
Control Neighborhood	16	23	30
	$12,645	$17,124	$25,000
	.72	.70	.96
Neighborhood 10			
Section 221(d)(3)	31	52	59
Housing	$ 9,690	$12,861	$17,796
	.55	.52	.69
Control Neighborhood	8	14	20
	$11,291	$17,485	$22,750
	.64	.71	.81
Neighborhood 11			
Section 221(d)(3)	47	38	61
Housing	$13,345	$16,042	$23,287
	.76	.65	.90
Control Neighborhood	28	30	28
	$12,072	$17,779	$24,134
	.69	.72	.93

in mean sales price and ratio do not indicate true differences in the areas within any of the three time periods. In addition, mean sales prices increased significantly across the three time periods. Intra-site ratios increased significantly across two of the time periods(t = -7.76, and t = -8.91). Finally, mean sales price increased significantly across the three time intervals, as did two of the three ratios.

Table 2
RESULTS OF T-TESTS BETWEEN SITE AND CONTROL NEIGHBORHOODS
(N = 11)

Variables	T-value	Probability*
Home Sales Price		
Time Interval 1	-.32	.75
Time Interval 2	-.37	.72
Time Interval 3	-.72	.49
Home Sales Price Ratio		
Time Interval 1	-.30	.77
Time Interval 2	-.35	.73
Time Interval 3	-.71	.50

*The probability factor represents the likelihood that this difference occurred by chance.

Table 3
RESULTS OF T-TESTS WITHIN SITE NEIGHBORHOODS
(N = 11)

Variables	Mean	T-value	Probability
Home Sales Price			
Price-Time 1	$16,442	-8.07	.000
Price-Time 2	22,495		
Price-Time 2	22,495	-8.13	.000
Price-Time 3	30,920		
Price-Time 1	$16,442	-9.35	.000
Price-Time 3	30,920		
Home Sales Price Ratio			
Ratio-Time 1	9327	.92	.377
Ratio-Time 2	.9145		
Ratio-Time 2	.9145	-7.76	.000
Ratio-Time 3	1.1918		
Ratio-Time 1	.9327	-7.91	.000
Ratio-Time 3	1.1918		

Table 4
RESULTS OF T-TESTS WITHIN CONTROL NEIGHBORHOODS
(N = 11)

Variables	Mean	T-value	Probability
Home Sales Price			
Price-Time 1	$16,059	-7.80	.000
Price-Time 2	21,878		
Price-Time 2	$21,878	-9.13	.000
Price-Time 3	29,288		
Price-Time 1	$16,059	-11.19	.000
Price-Time 3	29,288		
Home Sales Price Ratio			
Ratio-Time 1	.9127	.61	.554
Ratio-Time 2	.8909		
Ratio-Time 2	.8909	-8.75	.000
Ratio-Time 3	1.1300		
Ratio-Time 1	.9127	-8.10	.000
Ratio-Time 3	1.1300		

Discussion

Caution must be exercised in interpreting the findings because of the very small number of sites in the final analysis and the lack of other descriptive variables. With this in mind, several points can be noted.

Based on these findings, there is no evidence to suggest that the introduction of public housing in an area causes home sales prices to stagnate or decline, either in absolute terms or in relative terms using sales in the city of Memphis as a basis for comparison. In other words, apparent differences between sales prices near subsidized housing sites and other areas of the city are most likely due to the price differences existing before the subsidized housing was even constructed. This interpretation seems reasonable in light of the findings of both the descriptive and analytical results. Even if the results of the t-tests are ignored because of the small sample size or the method by which control neighborhoods were selected, the pattern of little change is apparent in the description presented in

Table 1. In all 11 cases, the 1976-1979 sales price ratio was higher than the 1968-1971 ratio.

It is interesting that all of the 11 pairs which had to be eliminated from the analysis because of lack of home sales were situated in isolated areas. Without exception, the 11 site neighborhoods were geographically set apart from other residential developments, and most were located either in the midst of industry or bounded partially or completely by "wilderness" (undeveloped land). Given the meager housing supply present in these neighborhoods, a lack of home sales comes as no surprise. This finding also suggests a tentative pattern in the 1970s in Memphis involving the placement of assisted housing in areas devoid of other residents. Further research utilizing data from other major cities would indicate whether this trend is present at the national planning level.

REFERENCES

Angrist, Shirley S. "Dimensions of Well-Being in Public Housing Families," *Environment and Behavior*, 6:495-516, December, 1974.

Berry, Brian J. L. *Consequences of Urbanization.* New York: St. Martin's Press, 1973.

Eiseman, Thomas. "Simulations and Requirements for Citizen Participation in Public Housing, the Traux Technique," *Environment and Behavior*, 7:99-123, March, 1975.

Gans, Herbert J. *The Urban Villagers.* New York: The Free Press, 1962.

Glass, Ruth, editor. *The Social Background of a Plan: A Study of Middlesborough.* London: Routledge & Kegan Paul, 1948.

Herberle, Rudolf. "The Normative Element in Neighborhood Relations," *Pacific Sociological Review*, 3:3-11, Spring, 1960.

Keller, Suzanne. *The Urban Neighborhood: A Sociological Perspective.* New York: Random House, 1968.

Shevky, Eshref and Wendell Bell. *Social Area Analysis.* Palo Alto, California: Stanford University Press, 1955.

Taube, Gerald and Jack Levin. "Public Housing as Neighborhood: The Effect of Local and Non-Local Participation," *Social Science Quarterly*, 52:534-542, 1971.

U.S. Department of Housing and Urban Development. *Code of Federal Regulations: Title 24, Parts 800-1699.* Washington, D.C.: Government Printing Office, 1981.

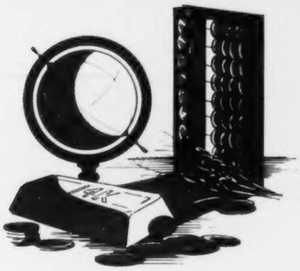
U.S. Department of Housing and Urban Development. *Programs of HUD. HUD-214-4-PA(2).* Washington, D.C.: Government Printing Office, 1978.

FOOTNOTES

[1] It is difficult to define a concept such as neighborhood in other than geographic terms (Keller, 1968). In addition to physical descriptions of locale, however, neighborhoods have been conceptualized in terms of symbolic boundaries (Gans, 1962) and their social characteristics (Glass, 1948; Herberle, 1960; Berry, 1973). Finally, neighborhoods have been identified on the basis of the socio-economic status of residents (Shevky & Bell, 1955). For the purpose of this study, a neighborhood was considered to be a geographically distinct area with relatively homogeneous social and economic characteristics.

[2] In this case, neighborhoods were matched on percentage of black residents and median home value.

TAX
CORNER



by Wm. Brent Carper, Ph.D, C.P.A.

RETIREMENT PLANS GET NEW LOOK WITH 401(k) PLANS

Introduction

A recent development in employee benefit planning is "401(k) plans," also popularly known as salary-reduction plans. Section 401(k) of the Internal Revenue Code is unique in that an employee is permitted to defer current taxation on the portion of his salary contributed by his employer to a qualified plan for the employee's benefit.

Purpose of 401(k)

As a general rule of federal taxation, if one has a right to elect either to receive income currently from an employer or to defer receiving such income, he is considered to have received that income in the year such election was made.[1] This rule is designed to prevent the shifting of income from one period to another period.

The 401(k) plan is an exception to this general rule. The purpose of section 401(k) is to permit an employee to elect to have his employer contribute a portion of his salary to a 401(k) plan or have the employer pay the amount directly to the employee. An exception to the rule arises where an amount of money is contributed directly to the 401(k) plan, because the employee is not currently taxed on such money. If the money is contributed to the employee directly, he naturally will be subject to income tax in the year of receipt.

A New Development

Although the privileges of 401(k) plans are sanctioned by the Internal Revenue Code for taxable years beginning after December 31, 1979, precise legal requirements are still uncertain due to the absence of final IRS regulations.[2] Proposed regulations were issued in November 1981 regarding 401(k) plans, but no regulations have been finalized.

The IRS has announced that the proposed regulations can be relied upon by employers in establishing and administering 401(k) plans.[3] Many employees, however, are reluctant to take advantage of various 401(k) plan opportunities because of the uncertainty surrounding publication of permanent regulations.

401(k) Plans As They Relate To Employers

Basics

In general, a 401(k) plan must be part of a profit-sharing or stock bonus plan. An employer contributes part of the employee's salary to a qualified trust. The employee is not taxed even though he has the option of receiving the employer's contribution in cash or having it paid to the trust.[4] As one might expect, 401(k) plans must meet basic requirements concerning employee elections, distributions, vesting, and non-discrimination requirements characteristic of employee retirement plans.

Employee Election

The plan must allow an employee to elect to have his contributions made to an employee trust or to take the cash.[5] Additionally, an employee may elect to receive a portion of the money subject to election in cash and have the remainder of the funds contributed to the plan.

Distributions

In order to qualify as a 401(k) plan, strict limitations must be placed upon the employee's right to withdraw amounts that were contributed to the plan in his behalf. As a general rule, contributions must not be distributable earlier than the occurrence of one of the following events:

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1. Retirement
2. Death
3. Disability
4. Separation from service
5. Age 59 1/2
6. Hardship[6]

All of the events which might trigger a distribution are objectively determined with the exception of "hardship." The conditions for hardship are very subjective and can lead to inconsistency in plan distributions dependent upon how a plan administrator defines the term.

"Hardship" is not defined by the Internal Revenue Code; however, the proposed regulations do offer some guidance. The regulations state that "if the distribution is necessary in light of the immediate and heavy financial need of the employee," a distribution may be made due to hardship.[7] The tests that must be met in order for this distribution to take place are:

1. The determination that a financial hardship exists and the amount to be distributed must be made in accordance with uniform and non-discriminatory standards set forth in the plan;
2. The distribution cannot exceed the amount required to meet the immediate needs created by the hardship; and
3. The funds needed are not reasonably available from other resources of the employee.[8]

Vesting

The portion of an employee's salary which is contributed to a 401(k) plan and the earnings that these contributions generate are completely vested. In other words, the employee has a non-forfeitable right to these funds subject only to the restrictions already discussed regarding distributions.

Non-Discrimination

Section 401(k) plans must be designed so that plan participation does not discriminate in favor of employees who are officers, shareholders, or highly compensated.[9] Furthermore, 401(k) plans must operate so that contributions and benefits under the plan do not favor the above mentioned employees.[10] These rules attempt to guarantee that plan participation is open to rank-and-file employees and not to just a select few.

Advantages to Employers

When section 401(k) was first enacted, a primary advantage to employers was the fact that contributions to a plan were not considered as wages for purposes of payroll taxes. Although this relieved the employer of some responsibility for paying payroll taxes, the advantage now has been severely limited by amendments to Code section 401(k). The exemption for Social Security taxes expired on January 1, 1984, while the exemption for Federal Unemployment Taxes will expire on January 1, 1985.[11]

Another benefit to the employer is the deduction allowed for contributions to a qualified 401(k) plan. Contribution amounts, within the statutory limits, are considered ordinary and necessary business expenses. Other potential benefits accruing to the employer include better employee morale, less employee turnover, and greater inducement to attract and retain qualified employees.

Disadvantages to Employers

The main disadvantage of 401(k) plans to an employer stems from the uncertainty caused by the lack of permanent regulations in the area. The most notable unanswered question concerns the definition of "hardship" to be used in determining allowable employee withdrawals from plans. Another potential disadvantage for employers is the accounting and legal fees that may be incurred should permanent regulations require restructuring of existing 401(k) plans at a later date.

401(k) Plans As They Relate To Employees

The first point which an employee should bear in mind with respect to 401(k) plans is that the plan must first be established by the employer. To clarify, an employee has a right to establish an individual retirement account (IRA) on his own, but an employee has no right to participate in a 401(k) plan until the employer offers such a plan to the employee. Additionally, 401(k) plans are unique in that the employee contributes to his employer's plan with *pre-tax* dollars as opposed to *post-tax* dollars. Yet, the amount of an employee's contribution to the plan is treated as a contribution by the employer, and not the employee. Thus, the contribution is not taxed to the employee until distribution.

Advantages to Employees

If an employee is given the option of participating or not participating in a 401(k) plan, several factors weigh heavily for participation. First, the employee is totally vested as to the portion of salary contributed to the plan plus the earnings thereon. That is, the employee has a non-forfeitable right to the funds subject only to the restrictions placed on withdrawal of the funds by section 401(k).

Second, there is no federal income tax paid on the earnings generated by the employee's deferrals until the money is actually distributed. In addition, most state and local governments do not subject the deferred amounts to income taxation until distribution. In fact, some states, for income tax purposes, even exempt distributions from 401(k) plans.

Third, the amount an employee is allowed to contribute to a 401(k) plan usually exceeds the amount that one would be able to contribute to an Income Retirement Account (IRA). The amount one can contribute to a plan is subject to restrictions imposed by the employer, but under section 401(k) can range from 2.0 to 10.0 percent of the employee's salary. To the contrary, IRA contributions legally are limited to $2,000 per year per wage earner and $2,250 for wage earners with non-working spouses.[12]

Finally, an employee's election to participate in a 401(k) plan does not limit his right also to participate in an IRA.[13]

Disadvantages to Employees

In order to gain benefits the employee also must give up some benefits. The first obvious benefit relinquished by the employee is the current use of the money which he contributes to a 401(k) plan until some future date. If the employee cannot afford to set aside a portion of his current salary for 401(k) purposes, then his only option may be to not participate.

Second, statutory restrictions regarding early withdrawal of funds also are a factor. An employer may distribute funds to the employee only upon the occurrence of death, disability, retirement, separation from service, attainment of age 59 1/2, or hardship of the employee.[14]

Third, contributions made to a 401(k) plan are not necessarily insured in the sense that savings deposits in a bank or other savings institution are insured. In other words, there is no absolute guarantee that the employee will some day enjoy the benefits of his contributions.

Finally, the employee should realize that participation in a 401(k) plan may reduce other employee benefits available to him. An employee should inquire of his employer whether or not his contributions to a 401(k) plan will reduce other benefits such as health care coverage, life insurance, pension and profit-sharing benefits, etc.

Conclusion

As earlier stated, 401(k) plans can be initiated only as part of a profit-sharing or stock bonus plan. Although the establishment of such plans seemingly offers significant benefits to both employers and employees, 401(k) plans also have their limitations. Thus, the reader is encouraged to discuss the details of such plans with a competent tax advisor before taking any action.

FOOTNOTES

[1] Reg. § 1.451-2(a).
[2] P.L. 95-600.
[3] Notice 82-1, 1982-1 CB 353.
[4] Code Sec. 402(a)(8).
[5] Prop. Reg. § 1.401(k)-1(a)(1).
[6] Prop. Reg. § 1.401(k)-1(b)(7).
[7] Prop. Reg. § 1.401(k)-1(d)(2).
[8] Ibid.
[9] Code Sec. 410(b)(1)(B).
[10] Code Sec. 401(a)(4).
[11] Code Sec. 3121(v), as added by P.L. 98-21.
[12] Code Sec. 219.
[13] Ibid.
[14] Code Sec. 401(k)(2)(B).

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